ORDER NO. MABR0303006C2

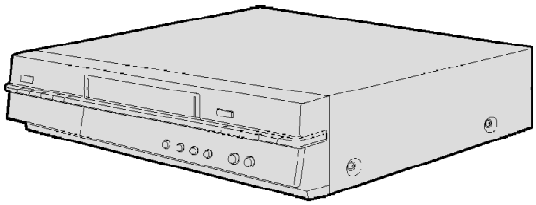
Service Manual

Video Cassette Recorder

Panasonic S-VHS VHS PAL 625 Hi-Fi

NV-SV120EB / NV-SV120EC / NV-SV120EP

Z-MECHANISM



SPECIFICATIONS

SPECIFICATIONS

ITEM	SPECIFICATION		ITEM	SPECIFICATION
POWER	SOURCE: 220-240 V AC 50/60 Hz		VIDEO	OUTPUT: EURO AV (AV1/AV2) Connector (21 pin x 2) 1.0 Vp-p, 75 Ω terminated S-VIDEO OUT Connector (S4P) 1.0 Vp-p, 75 Ω terminated VIDEO OUT Connector (Phone type) 1.0 Vp-p, 75 Ω terminated
	CONSUMPTION: 20 watts CONSUMPTION WHEN IN STANDBY MODE: Approx. 3W (NV-SV120EC/EP)			
RECORDING SYSTEM	2 rotary heads, helical scanning system		AUDIO	HEAD: 1 Stationary head (Normal-mono only) 2 channels (Hi-Fi Sound Stereo)
	PAL			INPUT: EURO AV (AV1/AV2) Connector (21 pin x 2) -9dBV(500 mV), More than 10 kΩ AUDIO IN (AV3:FRONT) Connector (Phone type) -9dBV(500 mV), More than 10 kΩ
TV TUNER SYSTEM	NV-SV120EB	UHF: CH21-CH69 (PAL I)		OUTPUT: AUDIO OUT Connector (Phone type) -6 dBV (500mV), Less than 1kΩ EURO AV (AV1/AV2) Connector (21 pin x 2) -6 dBV (500mV), Less than 1kΩ
	NV-SV120EC	VHF: CH2-CH12(PAL/SECAM B) UHF: CH21-CH69 (PAL/SECAM G) CATV: CHS01-CHS41 (PAL/SECAM B)	TAPE FORMAT	S-VHS/VHS Cassette Tape (Tape width 12.7 mm)
	NV-SV120EP	VHF: CH2-CH12 (PAL/SECAM B) CHR1-CHR12 (SECAM D) UHF: CH21-CH62 (PAL/SECAM G, SECAM K, PAL I) CATV: CHS01-CHS41 (PAL/SECAM B) 446Hz-470MHz (SECAM D)	TAPE SPEED	SP:23.39 mm/s LP: 11.695 mm/s EP:7.796 mm/s Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape EP: 12 hours with 240 min. type tape FF/REW Time: 60 sec. with 180 min. type tape
RF OUT SYSTEM	NV-SV120EB	UHF: CH21-CH68 (PAL I) 71 ± 3 dBμ, 75 Ω close	OPERATING TEMPERATURE:	5°C - 40°C
	NV-SV120EC	UHF: CH21-CH69 (PAL/SECAM G) 71 ± 3 dBμ, 75 Ω close	OPERATING HUMIDITY	35% - 80%
	NV-SV120EP	UHF: CH21-CH69 (PAL/SECAM G, SECAM K, PAL I) 71 ± 3 dBμ, 75 Ω close	DIMENSIONS	430 (W)-87 (H)-285(D) mm
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L'-R' heads)		WEIGHT	9.5 kg
	INPUT: EURO AV (AV1/AV2) Connector (21 pin x 2) 1.0 Vp-p, 75 Ω terminated S-VIDEO IN (AV3:FRONT) Connector (S4P) 1.0 Vp-p, 75 Ω terminated VIDEO IN (AV3:FRONT) Connector (Phone type) 1.0 Vp-p, 75 Ω terminated		STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. AC Mains Lead 1 pc. Infra-red Remote Controller
			SOLDER	This model use lead free solder (PbF).

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION

This service manual contains technical information which will allow service personnel to understand and service this model.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

Note:

1. **Adjustment procedures, Disassembly Procedures and Assembly Procedures for Mechanism Chassis are separate volume from this service manual. / Please refer to the service manual for Z-Mechanism Chassis. (Order No. VRD9802005C2)**
2. **The Model No. is indicated on the Schematic Diagram and Circuit Board Diagrams as follows.**

Model No.	Indication Mark
NV-SV120EB	(EB)
NV-SV120EC	(EC)
NV-SV120EP	(EP)

1.2. ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:
PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

Caution:

- **Pb free solder has a higher melting point than standard solder, Typically the melting point is 50-70°F (30-40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control,please set it to 700±20°F (370±10°C)**
- **Pb free solder will tend to splash when heated too high (about 1100°F/600°C).**

When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

2. GENERAL DESCRIPTIONS

2.1. SERVICE CAUTION

2.1.1. REPLACING IC6002/EEPROM

When the EEPROM: IC6002 is replaced, applicable model code, option code and electrical adjustment data will not be available.
Therefore, enter and/or adjust the necessary data after replacing IC6002 by referring following procedure.

STEP1.REPLACE THE IC6002

1. Remove the C.B.A. with Mechanism unit by referring the Disassembly procedure.

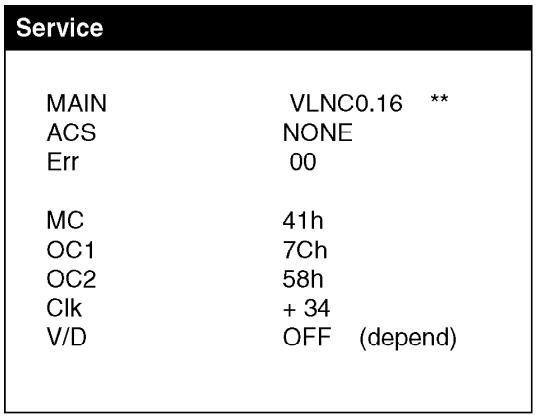
2. Disconnect the AC plug and replace the IC6002.

STEP2.INPUT THE MODEL & OPTION CODE

1. Set up the applicable model code and option code by ordering the following table.

PROCEDURE	F.I.P. DISPLAY
Turn on the Service Mode **1.Press the FF key and the EJECT key simultaneously for more than 3 seconds.**	
Activate the Service Mode 2 **2.While keep placing FF key, press the EJECT key in twice.**	
Activate the Entering Mode. **3.Press the EJECT key for more than 3 seconds.**	
Set the Mode 2. **4.Press the CH UP key in twice.**	
Display the Setting Code. **5.Press the POWER key to turn the power on.**	 **(Colon starts flashing)**
Enter the Model and Option Code. **6.Service Screen is displayed on the monitor.** **7.Set the applicable Model and Option code by using REW, PLAY, STOP and FF keys on theRemote Controller. (See Fig.S1 & S2)**	
Exit from Service Mode. **8.Press the POWER key to turn the power off.** **9. Press FF and EJECT keys simultaneously in 6 times.**	 **(Normal Indication)**

Fig.S1 Service Screen (sample)



Model No.	MC	OC1	OC2
NV-SV120EB	63h	54h	7Ch
NV-SV120EC	62h	74h	78h
NV-SV120EP	66h	74h	78h

Fig. S2 Model Code & Option Code

NOTE:
Since all electrical adjustments data is still not available, perform the Electrical Adjustment continuously.

2.1.2. CYLINDER UNIT REPLACEMENT

1. CYLINDER UNIT REPLACEMENT

A. Remove the mechanism unit from MAIN C.B.A./Chassis by referring "SECTION 2. Disassembly Procedure".

B. Remove the 3 screws (A) of the CYLINDER UNIT with a screw driver.

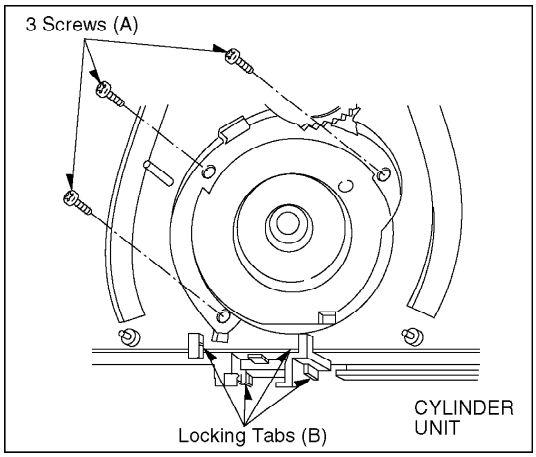
C. Unlock the 4 locking tabs (B) and disconnect the Cylinder flexible card from the FPC Holder.

D. Remove the CYLINDER UNIT.

CAUTION:

Handle the Cylinder flexible card with care. When it damaged, you should replace whole Cylinder unit.

Fig. S3



2. UPPER CYLINDER DISASSEMBLY

A. Remove 2 screws (A).

B. Remove the Cylinder Stator Unit.

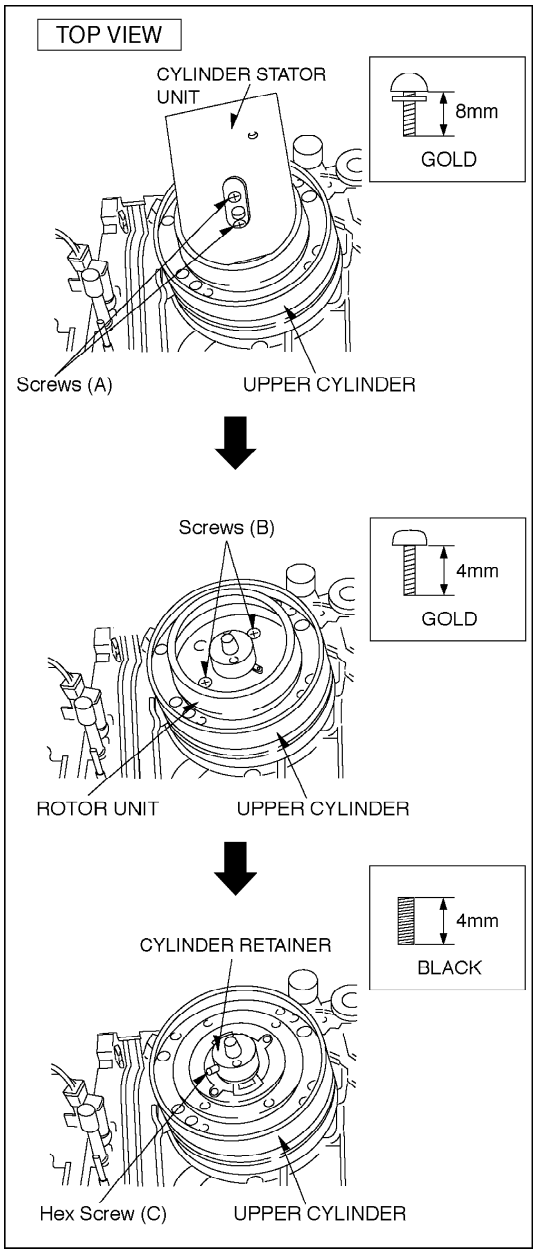
C. Remove 2 screws (B).

D. Remove the Cylinder Rotor Unit.

E. Loose Hex screw (C) (1.5 mm) and remove the CYLINDER RETAINER.

F. Remove the Upper Cylinder.

Fig. S4



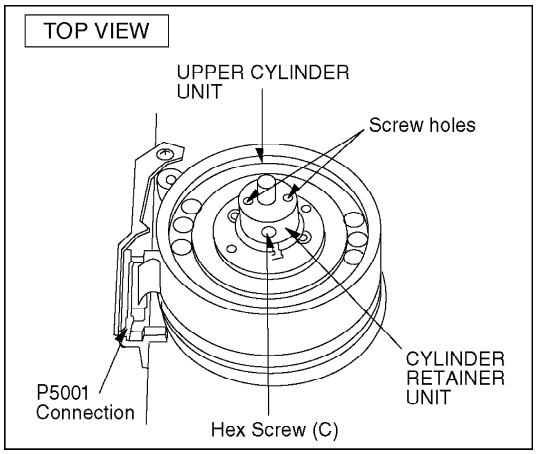
3. UPPER CYLINDER ASSEMBLY

When reassembling, perform the steps in the reverse order.

Notes:

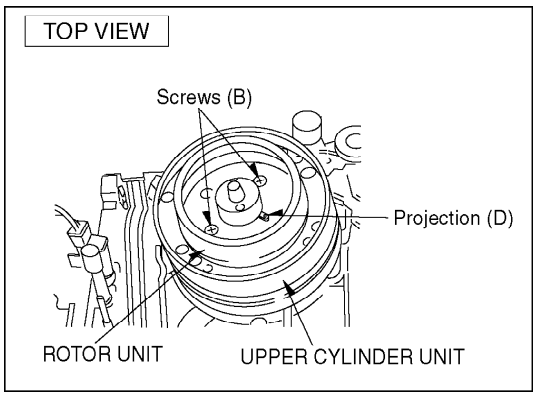
1. **Install the Cylinder Retainer so that the 2 holes on top of the Cylinder Retainer are at right angles with the P5001 Connection.**
2. **Tighten the Hex screw (C) (1.5 mm) while pressing down on top of the Cylinder Retainer.**

Fig. S5



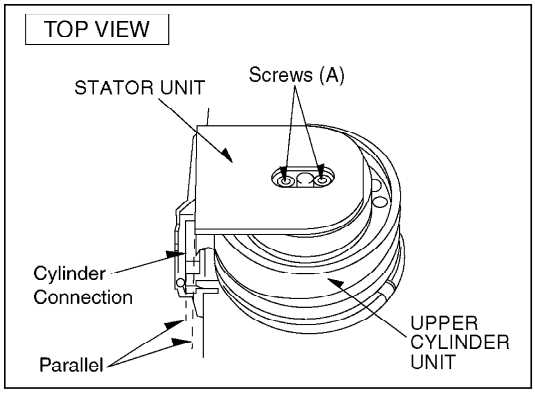
3. **Install the Cylinder Rotor Unit so that the inner hole of the Cylinder Rotor Unit fits to the small projection (D) on top of the Upper Cylinder.**
4. **Tighten 2 screws (B).**

Fig. S6



5. **install the Cylinder Stator Unit.**
6. **Tighten 2 screws (A).**

Fig. S7



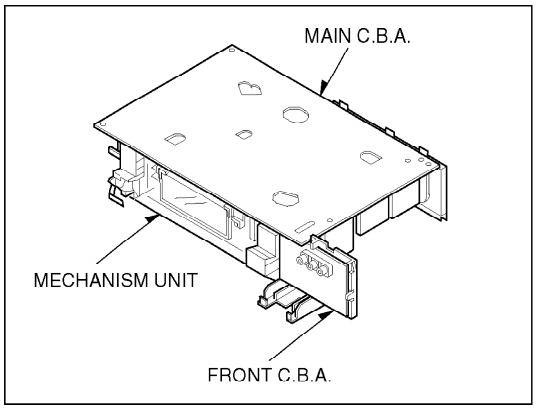
7. **Confirm the PG SHIFTER ADJUSTMENT with the alignment tape**

(PAL: VFJ8125H3F) and adjust it if necessary.

2.1.3. CHECKING OF MAIN C.B.A.

When servicing the MAIN C.B.A., take out the MAIN C.B.A. and mechanism from the frame and turn over.

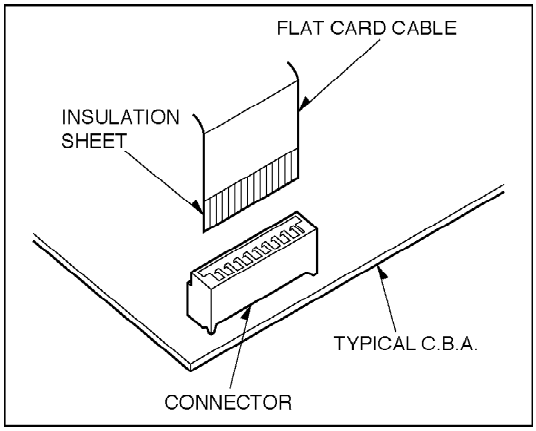
Fig. S8



2.1.4. FLAT CARD CABLE INSTALLATION

When installing the Flat Card Cable on the connector, install the Flat Card Cable with the cable contacts facing the connector contacts.

Fig. S9



2.2. REMOVAL OF CASSETTE TAPE

There are 2 ways to remove a cassette tape.

1. Service Information Display Operation

A. Press the FF and EJECT keys simultaneosly for 3 seconds and set the Service Mode 7.

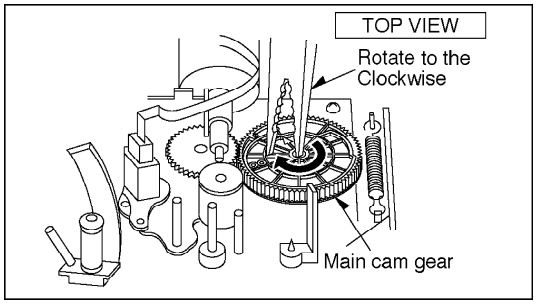
B. Press STOP key in order to rotate the Loading Motor for unloading operation. (Pay an attention of tape slack)

2. Manual Operation

A. Disconnect the AC Mains Lead and remove the Top Panel.

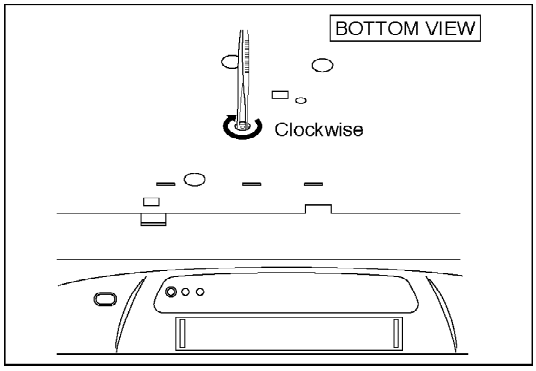
B. Rotate the Main Cam Gear clockwise until the Loading Posts move to fully unloaded position as shown in Fig. S10 . (Tape is remaining)

Fig. S10



C. Rotate the Capstan Motor clockwise from the bottom side to take up the tape.

Fig. S11



D. Rotate the Main Cam Gear clockwise until the cassette tape is ejected.

2.3. INTRODUCTION OF VIDEO HEAD CLEANING CASSETTE / (POLISHING TYPE)

1. **We are pleased to introduce Panasonic Video Head Cleaning Cassette, VFK0923FT [for service purposes] and VFK0923FSE [for end users] for all VHS/SVHS VCP and VCR.**
2. **These cleaning cassettes are exclusive removing the hard and sticky clogging on video heads.**
3. **These improve the efficiency of video head cleaning service and shortening cleaning time for end users.**

VFK0923FT (For Service usage)	
Type of Cassette	**Full VHS Cassette**
Cleaning Time	**10 Seconds/Time**
Tape Length	**20 m**
Usability in a Path	**180 Times**

VFK0823FSE (For end users)	
Type of Cassette	**Full VHS Cassette**
Cleaning Time	**10 Seconds/Time**
Tape Length	**3.34 m**
Usability in a Path	**30 Times**

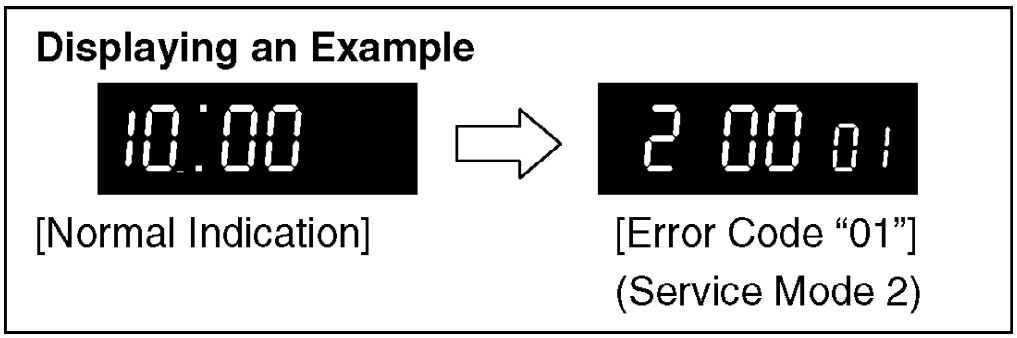
VFK0823FSE (For end users)

Note:

The tape material itself is the same in both types.

2.4. SELF-DIAGNOSIS RESULT DISPLAY

The "SELF-DIAGNOSIS RESULT DISPLAY & MEMORY function is built in this VTR.
It means that when the VCR detects undesirable condition, it can be displayed a “Error code (Two numbers from the right)” with Service Mode 2.
Since the "Error code" is stored in the EEPROM, it can be displayed although after disconnected the AC leads. It can be displayed with Service Mode 2.
(If a second error had been detected, only the most recent error is displayed.)
For more details, refer to the Service Manual for Z-Mechanism Chassis Order number VRD9802005C2.



INDICATION	CAUSE	REMEDY/CHECK
01	After cylinder lock is detected, the cylinder does not start rotating again even after tape unloading.	Check the cylinder motor drive circu
02	Cassette tape is not wound up during the tape unloading except EJECT mode.	Check the capstan motor drive circu
03	Mechanism locks during mode transition except EJECT mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment. 3. Check the mode switch.
04	Mechanism locks during tape unloading.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment.
06	Mechanism locks after tape unloading in EJECT mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment for cass
07	During recording mode, recording signal is less than the normal condition.	Protection of the over-current flowin transistor which produces the powe for recording mode.
08	Recording circuit works except recording mode.	Check the recording circuit.
16	Cylinder lock detection.	Check the cylinder unit and the cylir drive circuit.
17	Supply reel mechanism lock detection	Check the supply reel mechanism ai supply reel circuit.
18	Take-up reel mechanism lock detection	Check the Take-up reel mechanism a Take-up reel circuit.
2*	PG shifter automatic adjustment error.	Check the servo/system control circ cylinder unit.

Fig. T1 Self-Test indication Display

2.5. CAUTION FOR AC MAINS LEAD (NV-SV120EB)

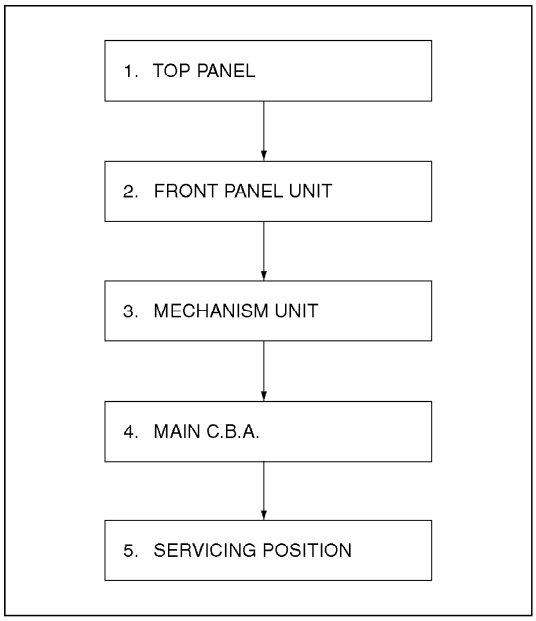
3. ADJUSTMENT PROCEDURES

3.1. DISASSEMBLY METHOD

3.1.1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

Fig. D1

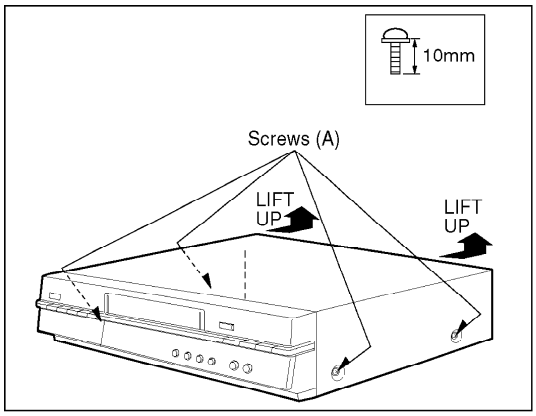


3.1.2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove	**4 Screws (A)**

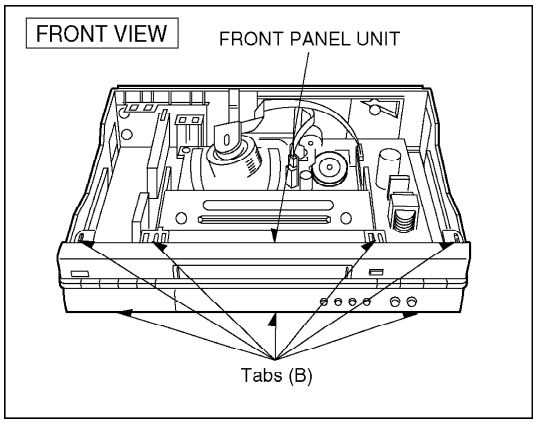
Fig.D2



2. REMOVAL OF THE FRONT PANEL UNIT

Unlock	**7 Tabs (B)**

Fig. D3



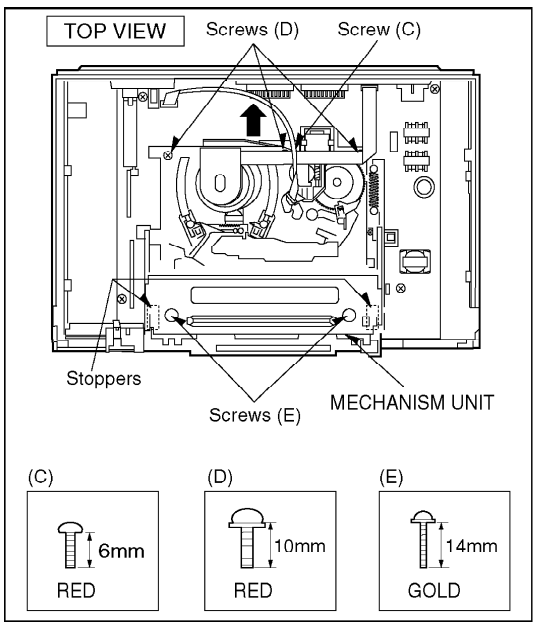
3. REMOVAL OF THE MECHANISM UNIT

Remove	**Screw (C)**
Remove	**3 Screws (D)**
Remove	**2 Screws (E)**

Note:

1. **Keep pressing 2 stoppers on Cassette Holder Plate and Press Cassette Holder Plate to the rear.**
2. **Remove the Mechanism Unit after bend the Cylinder Shield in the direction of the arrow.**

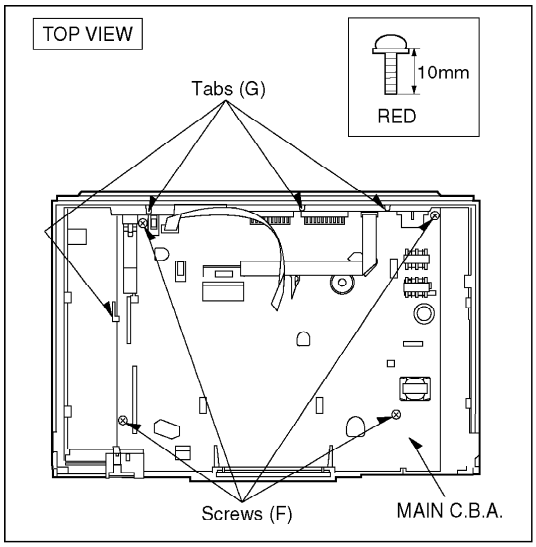
Fig. D4



4. REMOVAL OF THE MAIN C.B.A.

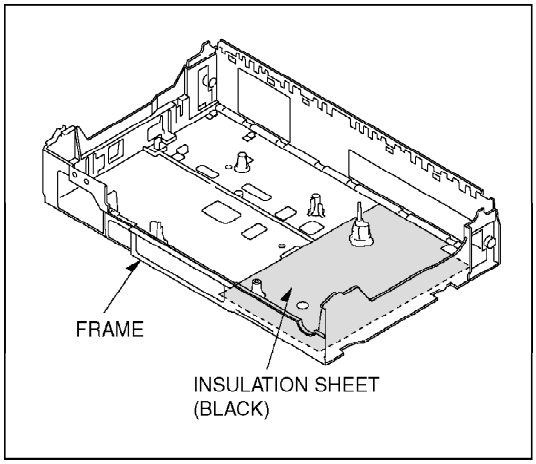
Remove	**4 Screws (F)**
Unlock	**4 Tabs (G)**

Fig. D5



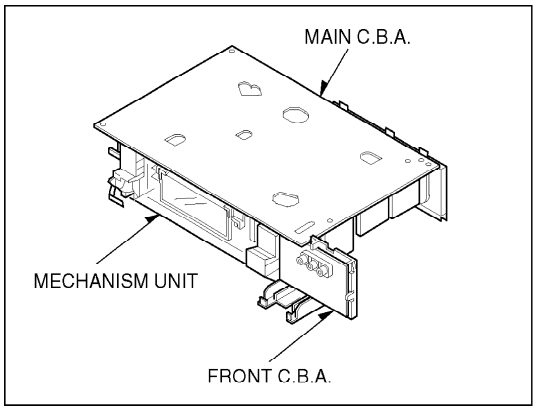
NOTE:
Before mounting the MAIN C.B.A. onto the frame, be sure to confirm that the insulation sheet is mounted on the frame as shown in Fig. D6 .

Fig. D6



5. SERVICING POSITION

Fig. D7



3.2. MECHANICAL ADJUSTMENT PROCEDURES

Refer to the Service Manual for Z-Mechanism Chassis. / (Order No. VRD9802005C2)

3.3. ELECTRICAL ADJUSTMENT PROCEDURES

3.3.1. TEST EQUIPMENT

The following equipments are required for Electrical Adjustments.

1. Dual-Trace Oscilloscope
   - Voltage Range: 0.005-5V/div
   - Frequency Range: DC-35MHz
   - Probes: 10:1 / 1:1
2. Frequency Counter
   - Frequency Range: 0-10MHz
   - Probes: 1:1
3. Universal Counter
4. Digital Volt Meter (D.V.M.)
5. Video Sweep Generator
6. Sinewave Generator
7. Video Pattern Generator
8. Monitor TV
9. DC Power Supply
10. VHS/S-VHS Blank Tape
11. VHS Alignment Tape
    - Parts No.: VFJ8125H3F(PAL)

3.3.2. VCR SETTING

When no indication in the procedure, set each selector as follows.

1. TAPE SPEED: SP

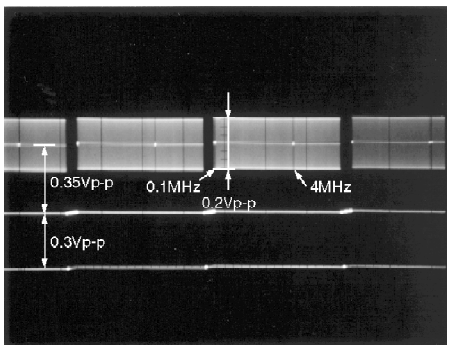
2. CHANNEL: AV1/AV2/AV3
(Set to signal input terminal number)

3. S-VHS SW: ON

3.3.3. ADJUSTMENTS

ITEM	TP	ADJ.	MODE	INPUT	TAPE	M. EQ.	SPEC	REMARKS
PG SHIFTER ADJUSTMENT	---	---	PLAYBACK	---	ALIGNMENT TAPE (PAL)	---	---	Refer to procedure as shown in Fig. E5.
S-VHS FREQUENCY RESPONSE ADJUSTMENT	VIDEO OUT (TW3021)	---	SP/LP PLAYBACK (SELF-REC)	VIDEO SWEEP (See Fig. E1)	S-VHS BLANK TAPE	OSCILLO SCOPE/ VIDEO SWEEP GENERATOR	SP:-4.5+-1(dB) (50~70%) LP:-6.0+-1(dB) (40~60%) (See Fig.E2)	Refer to the procedure as shown in Fig. E6.
VHS FREQUENCY RESPONSE ADJUSTMENT	VIDEO OUT (TW3002)	---	SP/LP PLAYBACK (SELF-REC)	VIDEO SWEEP (See Fig. E3)	VHS BLANK TAPE	OSCILLO SCOPE/ VIDEO SWEEP GENERATOR	SP: 0+-1 (dB) (90~110%) LP: 0+-1 (dB) (90~110%) (See Fig. E4)	Refer to the procedure as shown in Fig. E7.

Fig.E1



CONDITION: BURST SIGNAL OFF / 75ohm TERMINATED

Fig.E2

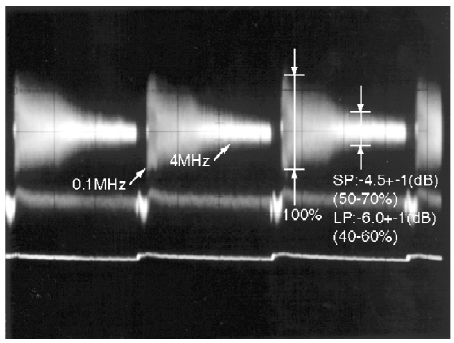
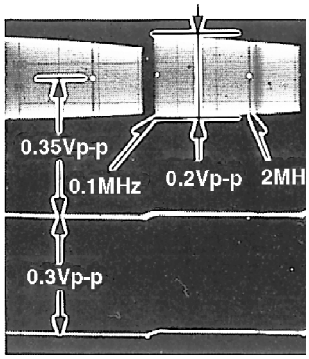
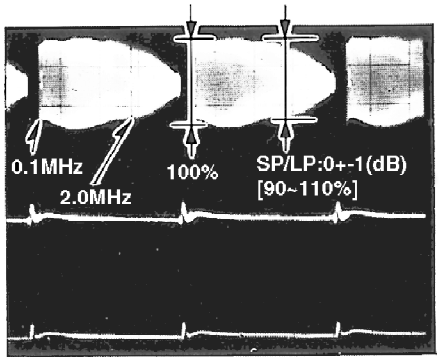


Fig.E3



CONDITION: BURST SIG
75ohm TERMI

Fig.E4



3.3.4. PG SHIFTER ADJUSTMENT / (AUTOMATIC)

PROCEDURES	FIP DISPLAY
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP key once.	
Insert the Alignment cassette tape. (PAL:VFJ8125H3F)	
When the sequence of the automatical adjustment has been terminated, the following action has been made. ***SUCCEED: The cassette tape is ejected.** ***ERROR : The "F2"is displayed on the FIP.** **(Check the Servo/Syscon circuit and Cylinder unit.)**	
Release the Service mode by pressing the EJECT and FF keys simultaneously in 6 times until the FIP becomes normal indication.	

Fig. E5

3.3.5. S-VHS VIDEO FREQUENCY RESPONSE ADJUSTMENT

PROCEDURES	FIP DISPLAY
Set the 3D DNR SW to ON, and the S-VHS REC to ON in OSD menu fuction. / Insert the S-VHS BLANK TAPE. / Input the Video sweep signal (See Fig. E1) to AV3 (S-VIDEO IN) and record it in SP and LP.	
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP and/or CH DOWN key until "11" is displayed on FIP.	
Insert the Self-recorded tape and playback it. (SP/LP mode)	
Connect the Oscilloscope to: *CH1....Video Out (TW3021). *CH2....V.FREQ.(TW6002)	
Press the "4" key on the remote controller. (Confirm that TW6002 becomes high(2.5V)).	
Adjust the Frequency response by pressing the "2"(increase) and/or "8"(decrease) key on the Remote Controller. (See Fig.E2)	
Store the Adjusted value by pressing the "5" key on the Remote Controller.	
Release the Service mode by pressing the EJECT and FF keys simultaneously in 6 times until the FIP becomes normal indication.	

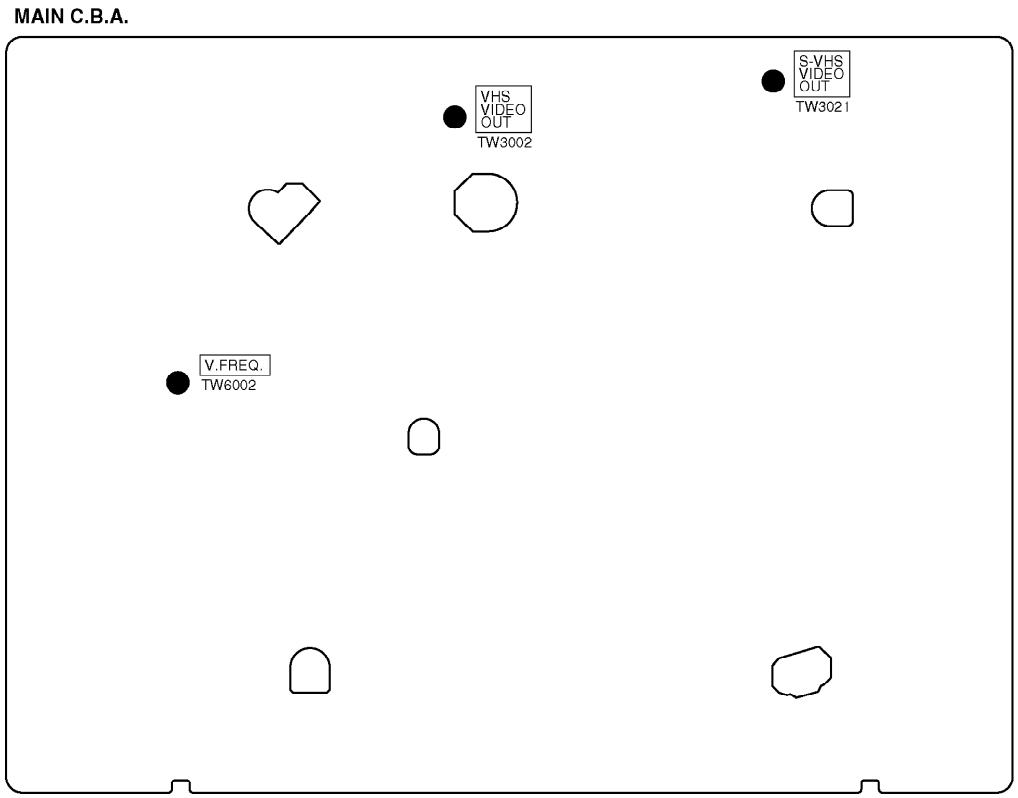
Fig. E6

3.3.6. VHS VIDEO FREQUENCY RESPONSE ADJUSTMENT

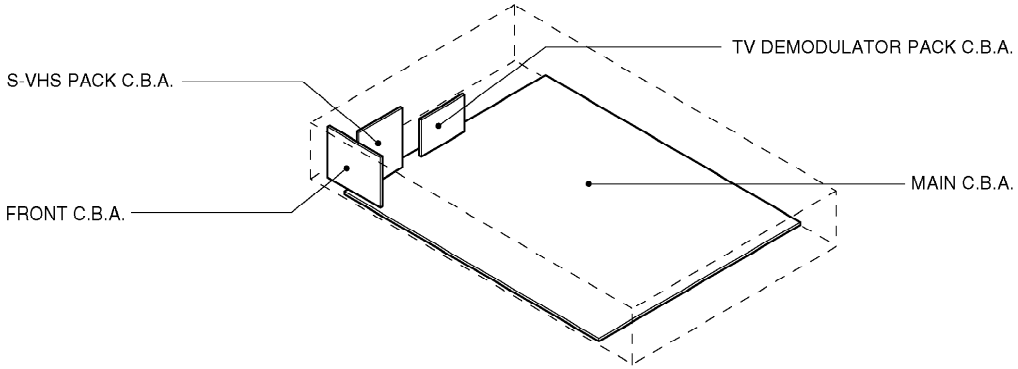
PROCEDURES	FIP DISPLAY
Set the S-VHS ET REC to OFF in OSD menu function, but the 3D DNR SW to ON. / Insert the VHS Blank Tape. / Input the Video sweep signal (See Fig. E3) to AV1 (VIDEO IN) and record it in SP and LP.	
Press the FF and EJECT Keys simultaneously for 3 seconds.	
Press the FF and EJECT Keys simultaneously twice.	
Press the EJECT key for 3 seconds.	
Press the CH UP and/or CH DOWN key until "11" is displayed on FIP.	
Insert the Self-recorded tape and playback it. (SP/LP mode)	
Connect the Oscilloscope to: *CH1....Video Out (TW3002). *CH2....V.FREQ.(TW6002)	
Press the "4" key on the remote controller. (Confirm that TW6002 becomes high(2.5V)).	
Adjust the Frequency response by pressing the "2"(increase) and/or "8"(decrease) key on the Remote Controller. (See Fig.E4)	
Store the Adjusted value by pressing the "5" key on the Remote Controller.	
Release the Service mode by pressing the EJECT and FF keys simultaneously in 6 times until the FIP becomes normal indication.	

Fig. E7

3.3.7. LOCATION OF TEST POINTS & CONTROLS



3.3.8. CIRCUIT BOARD LAYOUT



4. ABBREVIATIONS

5. INPUT/OUTPUT CHART

5.1. INPUT/OUTPUT CHART FOR IC6001

5.2. TRUTH TABLE (EC/EP MODEL)

5.3. TRUTH TABLE (EB MODEL)

6. WAVEFORM TABLE & VOLTAGE CHART

6.1. WAVEFORM TABLE

6.2. VOLTAGE CHART

7. BLOCK DIAGRAMS

7.1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

7.2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

7.3. S-VHS BLOCK DIAGRAM

7.4. AUDIO BLOCK DIAGRAM

8. SCHEMATIC DIAGRAMS

8.1. POWER TRANSFORMER SECTION IN MAIN SCHEMATIC DIAGRAM

8.2. POWER SUPPLY/ RF SECTION IN MAIN SCHEMATIC DIAGRAM

8.3. TIMER SECTION IN MAIN SCHEMATIC DIAGRAM

8.4. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

8.5. LUMINANCE & CHROMINANCE/ AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

8.6. Hi-Fi AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

8.7. INPUT/ OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM

8.8. DECODER SECTION IN MAIN SCHEMATIC DIAGRAM

8.9. TV DEMODULATOR PACK SCHEMATIC DIAGRAM

8.10. S-VHS PACK SCHEMATIC DIAGRAM

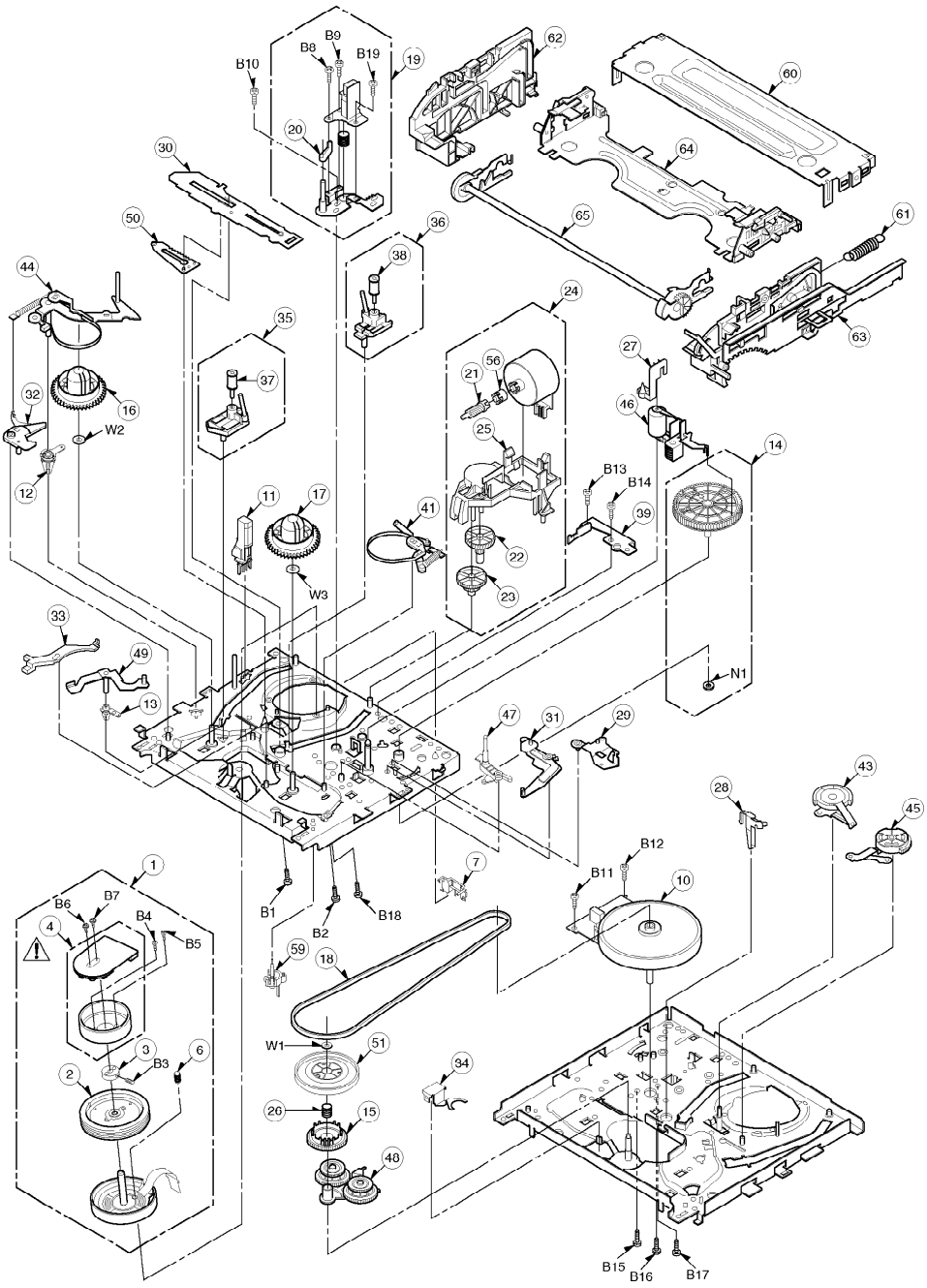
8.11. FRONT SCHEMATIC DIAGRAM

8.12. CYLINDER STATOR UNIT SCHEMATIC DIAGRAM

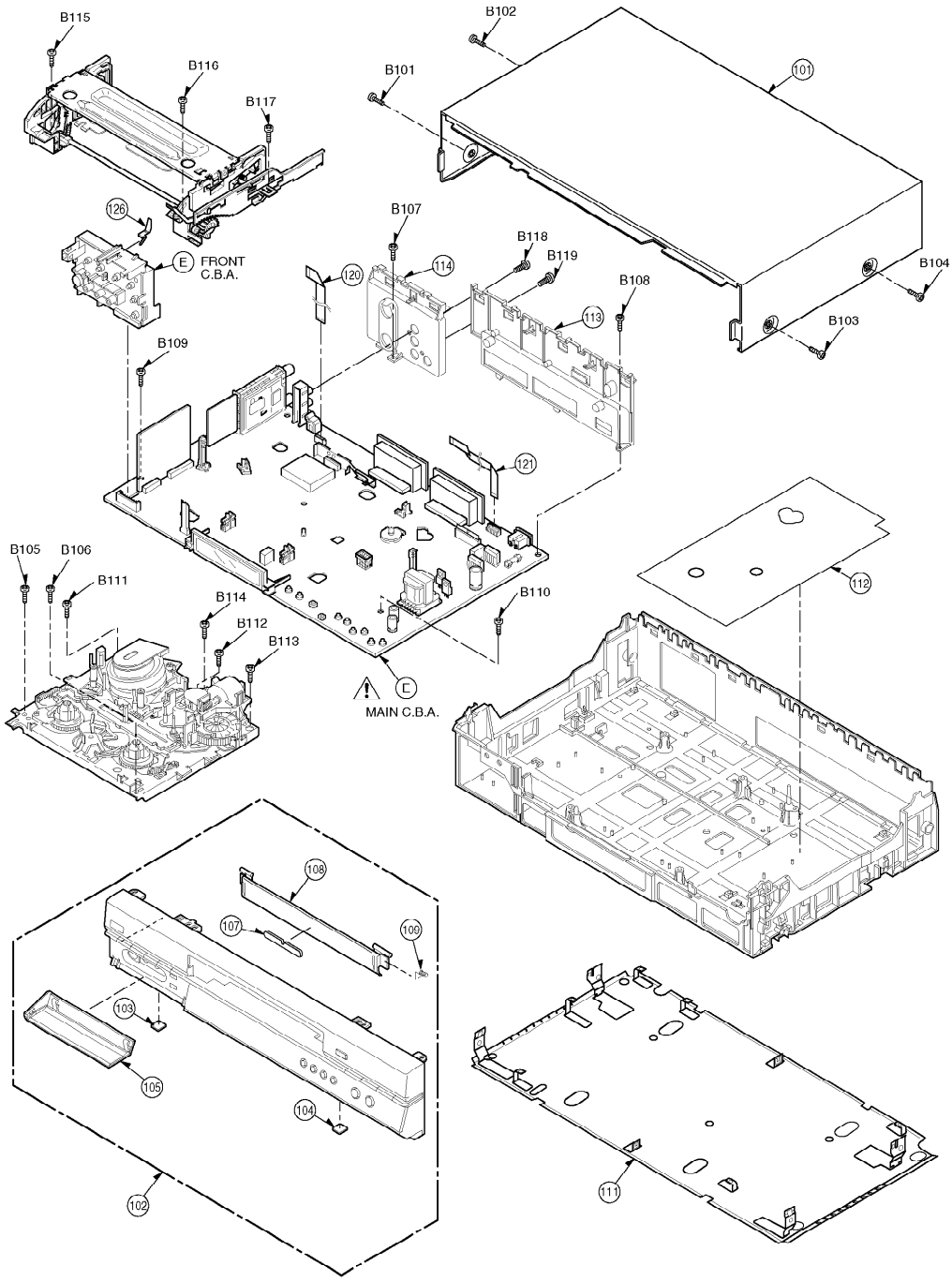
8.13. CAPSTAN UNIT SCHEMATIC DIAGRAM

9. CIRCUIT BOARD ASSEMBLIES

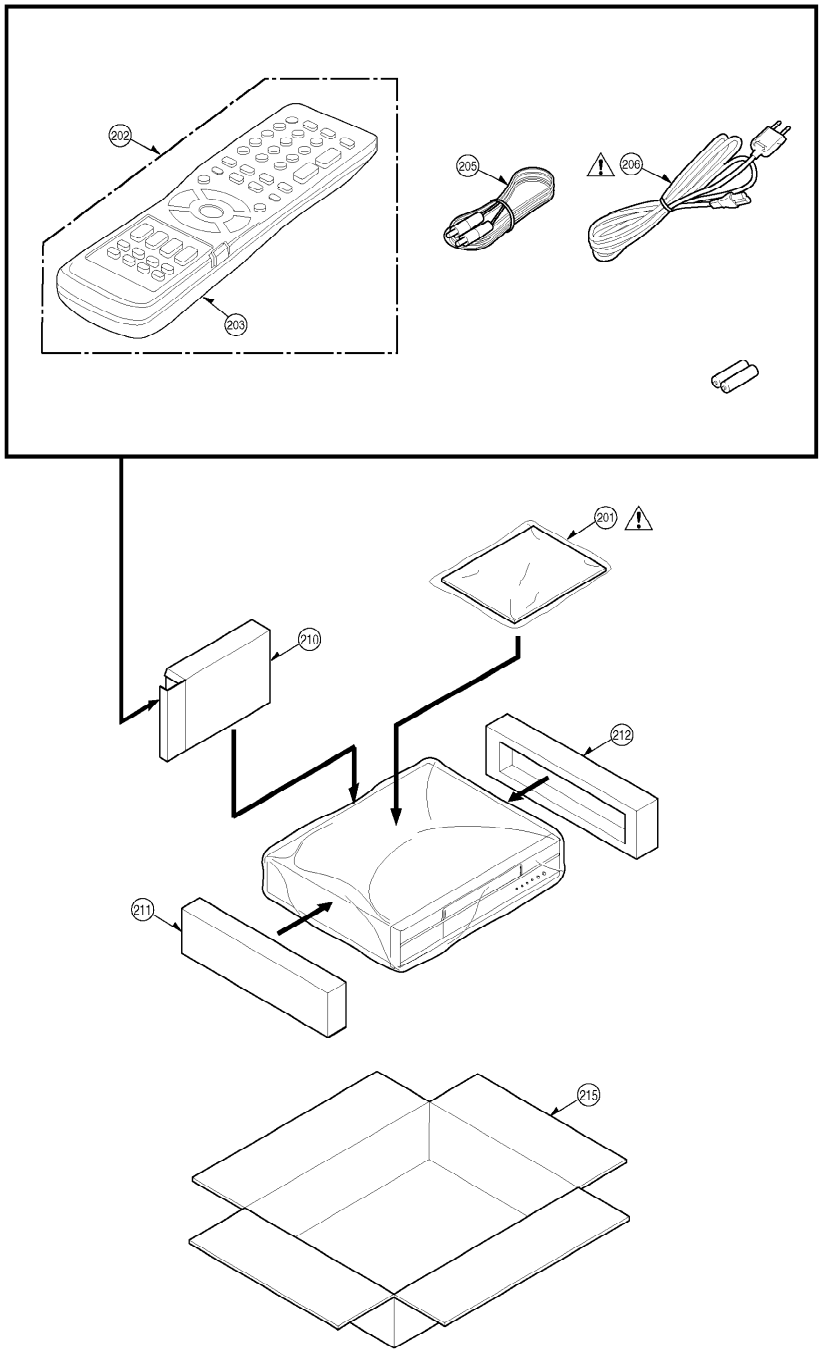
9.1. TV DEMODULATOR PACK C.B.A.
9.2. CYLINDER STATOR UNIT
9.3. FRONT C.B.A.
9.4. MAIN C.B.A.
9.5. S-VHS PACK C.B.A.
10. EXPLODED VIEWS
10.1. CHASSIS PARTS SECTION



10.2. CASING PARTS SECTION



10.3. PACKING PARTS SECTION



11. REPLACEMENT PARTS LIST

11.1. CHASSIS PARTS SECTION PARTS LIST

- All parts except parts mentioned [AVC-SPC] in the Remarks column are supplied from MAVD.
Parts mentioned [AVC-SPC] are supplied from PAVC-CSG (AVC-SPC).

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
1	VEG1600	CYLINDER UNIT	
2	VXP2173	UPPER CYLINDER UNIT	
3	VDB1256	CYLINDER RETAINER	
4	VEM0715	CYLINDER MOTOR UNIT	⚠
6	VXS0135	EARTH BRUSH UNIT	
7	VMD3795	FLAT CABLE HOLDER	
10	VEK9069	CAPSTAN UNIT	
11	L1AZ00000004	FE HEAD	
12	VDB1431	TENSION ARM BOSS	
13	VDB1460	SUPPLY BRAKE ARM BOSS	
14	VDG1220KIT	MAIN CAM GEAR	
15	VDG1221	CONVERSION GEAR	
16	VDR0350	REEL TABLE	
17	VDR0350	REEL TABLE	
18	VDV0382	CAPSTAN BELT	
19	VED0412	A/C HEAD UNIT	
20	VMX2656	P4 CAP	
21	VDG1217	WORM GEAR	
22	VDG1218	WORM WHEEL GEAR	
23	VDG1219	CENTRE GEAR	
24	VEM0604	LOADING MOTOR UNIT	
25	VMD2619	MOTOR BRACKET	
26	VMB3045	CONVERSION GEAR SPRING	
27	VMD2620	OPENER PIECE	
28	VMD2738	LED PRISM	
29	VML3165	DRIVE RACK ARM	
30	VML3166	MAIN LEVER	
31	VML3167	DRIVE MAIN LEVER ARM	
32	VML3172	SUPPLY SPRING ARM	
33	VML3176	CONVERSION LEVER A	
34	VML3177	CONVERSION LEVER B	
35	VXA6040	INCLINED BASE (S) UNIT	
36	VXA5854	INCLINED BASE (T) UNIT	
37	VXP1891	ROLLER POST (S) UNIT	
38	VXP1891	ROLLER POST (T) UNIT	
39	VMA9672	SUPPORT ANGLE	
41	VXL2667	TAKE UP BRAKE ARM UNIT	
43	VXL2670	TAKE UP LOADING ARM UNIT	
44	VXL2798	TENSION ARM UNIT	
45	VXL2672	SUPPLY LOADING ARM UNIT	
46	VXL2785	PINCH ARM UNIT	
47	VXL2996	P5 ARM UNIT	
48	VXL2792	IDLER ARM UNIT	
49	VXL2733	SUPPLY BRAKE ARM UNIT	
50	VML3271	LOADING RACK B	
51	VXP2035	CENTRE CLUTCH UNIT	
56	VDP1660	MOTOR COUPLING	
59	VMD2858	S DETECT ACTUATOR	
60	VMA9516	TOP PLATE	
61	VMB3047	CONNECTION SPRING	

Ref. No.	Part No.	Part Name & Description	Remarks
62	VMD3379	SIDE PLATE (L)	
63	VXA6540	SIDE PLATE (R) UNIT	
64	VXA5746	CASSETTE HOLDER UNIT	
65	VXP1730	MAIN SHAFT UNIT	
B1	VHD1117	SCREW	
B2	VHD1117	SCREW	
B3	VHD0842	SCREW	
B4	VHD0843	SCREW	
B5	VHD0843	SCREW	
B6	VHD0844	SCREW	
B7	VHD0844	SCREW	
B8	VHD1066	SCREW	
B9	VHD1066	SCREW	
B10	VHD1044	SCREW	
B11	VHD1060	SCREW	
B12	VHD1071	SCREW	
B13	XTS26+6F	SCREW	
B14	XTN26+6F	SCREW	
B15	XTN26+7J	SCREW	
B16	XTN26+7J	SCREW	
B17	XTN26+7J	SCREW	
B18	VHD1095	SCREW	
B19	VHD1185	SCREW	
N1	VHN0311	PUSH NUT	
W1	VMX2208	WASHER	
W2	VMX3022	WASHER	
W3	VMX3022	WASHER	

11.2. CASING PARTS SECTION PARTS LIST

- All parts except parts mentioned [AVC-SPC] in the Remarks column are supplied from MAVD.
Parts mentioned [AVC-SPC] are supplied from PAVC-CSG (AVC-SPC).

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
101	VGM1990	TOP PANEL silver	
102	VYP8696	FRONT PANEL UNIT	NV-SV120EB-S
102	VYP8697	FRONT PANEL UNIT	NV-SV120EC-S
102	VYP8698	FRONT PANEL UNIT	NV-SV120EP-S
103	RKA0072-K	FOOT	
104	RKA0072-K	FOOT	
105	VYF2889	DOOR UNIT	NV-SV120EB-S
105	VYF2890	DOOR UNIT	NV-SV120EC-S
105	VYF2891	DOOR UNIT	NV-SV120EP-S
107	VGB0554	SUPER DRIVE BADGE	
108	VKF3706	BLINDER PANEL	
109	VMB2521	BLINDER SPRING	
111	VKU0575	BOTTOM PLATE	
112	VMZ3099-W	V0 SHEET	VMZ3099
113	VJH1175	JACK BOARD	
114	VJH1231	ANT BOARD SV120	
120	VWJ1651	FFC (P4002-A/C HEAD)	
121	VWJ1282	FFC (P2502-CYL)	
126	VMC1721	EARTH SPRING	
B101	XTW3+10TFC	SCREW TOP CASE	
B102	XTW3+10TFC	SCREW TOP CASE	
B103	XTW3+10TFC	SCREW TOP CASE	
B104	XTW3+10TFC	SCREW TOP CASE	
B105	VHD0168	SCREW FOR MECHA.CHAS	
B106	VHD0168	SCREW FOR MECHA.CHAS	
B107	VHD1092	SCREW	
B108	VHD1092	SCREW	
B109	VHD1092	SCREW	
B110	VHD1092	SCREW	
B111	VHD1092	SCREW	
B112	VHD1092	SCREW	
B113	VHD1092	SCREW	
B114	XTV26+8FR-NC	TAPPING SCREW	
B115	XTV26+8FR	SCREW	
B116	XTV26+8FR	SCREW	
B117	XTV26+8FR	SCREW	
B118	XTV3+8GFZ	TAPPING SCREW	
B119	XTV3+6JFZ	SCREW	

11.3. PACKING PARTS SECTION PARTS LIST

- All parts except parts mentioned [AVC-SPC] in the Remarks column are supplied from MAVD.
Parts mentioned [AVC-SPC] are supplied from PAVC-CSG (AVC-SPC).

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
201	RQTD0037-D	⚠ OPERATING INSTRUCTIONS (GERMAN)	NV-SV120EC-S
201	RQTD0038-A	⚠ OPERATING INSTRUCTIONS (ENGLISH)	NV-SV120EC-S
201	RQTD0041-H	⚠ OPERATING INSTRUCTIONS (DUTCH)	NV-SV120EC-S
201	RQTD0042-C	⚠ OPERATING INSTRUCTIONS (FRENCH)	NV-SV120EC-S
201	RQTD0043-B	⚠ OPERATING INSTRUCTIONS (ENGLISH)	NV-SV120EB-S
201	RQTD0045-K	⚠ OPERATING INSTRUCTIONS (FINISH)	NV-SV120EC-S
201	RQTD0046-J	⚠ OPERATING INSTRUCTIONS (DANISH)	NV-SV120EC-S
201	RQTD0047-U	⚠ OPERATING INSTRUCTIONS (PORTUGUESE)	NV-SV120EC-S
201	RQTD0048-Z	⚠ OPERATING INSTRUCTIONS (SWEDISH)	NV-SV120EC-S
201	RQTD0049-M	⚠ OPERATING INSTRUCTIONS (SPANISH)	NV-SV120EC-S
201	RQTD0050-T	⚠ OPERATING INSTRUCTIONS (HUNGARIAN)	NV-SV120EP-S
201	RQTD0051-R	⚠ OPERATING INSTRUCTIONS (RUSSIAN)	NV-SV120EP-S
201	RQTD0052-S	⚠ OPERATING INSTRUCTIONS (CZECHOSLOVAKIAN)	NV-SV120EP-S
201	RQTD0053-Q	⚠ OPERATING INSTRUCTIONS (POLISH)	NV-SV120EP-S
201	RQTD0080-Y	⚠ OPERATING INSTRUCTIONS (ENGLISH)	NV-SV120EP-S
202	N2QAKB000043	REMOTE HV60,MV20	NV-SV120EC-S/EP-S
202	N2QAKB000044	REMOTE HV60,MV20EB	NV-SV120EB-S
203	R0186-720010	BATTERY COVER	
205	VJA0728-A	RF CABLE EG/EGC	
206	RJA0044-3C	⚠ POWER CORD (MINI/EB)	NV-SV120EB-S
206	RJA0043-1C	⚠ POWERCORD(MINI/E+EG)	NV-SV120EC-S/EP-S
210	VPK2246	ACCESSORIES PACKING	
211	VPN5555	CUSHION (L)	
212	VPN5554	CUSHION (R)	
215	VPG0S68	PACK.CASE SV120 S	
		SERVICE FIXTURES & TOOLS	
	VFJ8125H3F	VHS ALIGNMENT TAPE (PAL)	[AVC-SPC]
	VFK0335	RETAINING RING REMOVER (3mm/ 4mm)	[AVC-SPC]
	VFK0329	POST ADJUSTMENT SCREWDRIVER	[AVC-SPC]
	VFK0326	HEX WRENCH SET	[AVC-SPC]
	VFK0132	BACK TENSION METER	[AVC-SPC]
	VFK27	HEAD CLEANING STICK	[AVC-SPC]
	VFK1024	MOLYTONE GREASE	[AVC-SPC]
	VFK0330	FINE ADJUSTMENT GEAR DRIVER	[AVC-SPC]
	VFK1301	SILICONE GREASE	[AVC-SPC]

Ref. No.	Part No.	Part Name & Description	Remarks
	VFK1298	FLOIL GREASE	[AVC-SPC]

11.4. ELECTRICAL PARTS LIST

- All parts except parts mentioned [AVC-SPC] in the Remarks column are supplied from MAVD.
Parts mentioned [AVC-SPC] are supplied from PAVC-CSG (AVC-SPC).

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.
6. " *1 ", " *2 ", " *3 ", " *4 ", " *5 " in the Remarks column shows the models as follows.
" *1 ": NV-SV120EC
" *2 ": NV-SV120EB
" *3 ": NV-SV120EP

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP06F09B	MAIN C.B.A.	(RTL) *1
			THE FOLLOWING C.B.A. IS INCLUDED IN MAIN C.B.A.
			VEP07A23S-SK
■	VEP06F09C	MAIN C.B.A.	(RTL) *2
			THE FOLLOWING C.B.A. IS INCLUDED IN MAIN C.B.A.
			VEP07A23T-SK
■	VEP06F09E	MAIN C.B.A.	(RTL) *3
			THE FOLLOWING C.B.A. IS INCLUDED IN MAIN C.B.A.
			VEP07A23U-SK
■	VEP07A23S-SK	TV DEMODULATOR PACK C.B.A.	(RTL) *1
			INCLUDED IN MAIN C.B.A.(VEP06F09B).
■	VEP07A23T-SK	TV DEMODULATOR PACK C.B.A.	(RTL) *2
			INCLUDED IN MAIN C.B.A.(VEP06F09C).
■	VEP07A23U-SK	TV DEMODULATOR PACK C.B.A.	(RTL) *3
			INCLUDED IN MAIN C.B.A.(VEP06F09E).
■	VEP03G25A	S-VHS PACK C.B.A.	(RTL) *1, *3
■	VEP03G25B	S-VHS PACK C.B.A.	(RTL) *2
■	VEP04832A	FRONT C.B.A.	(RTL)
■	----------	CYLINDER STATOR C.B.A.	INCLUDED IN CYLINDER STATOR UNIT (VEM0715).

Ref. No.	Part No.	Part Name & Description	Remarks
■	----------	CAPSTAN DRIVE C.B.A.	INCLUDED IN CAPSTAN UNIT (VEK9069).
■	VEP06F09B	MAIN C.B.A.	(RTL) *1
■	VEP06F09C	MAIN C.B.A.	(RTL) *2
■	VEP06F09E	MAIN C.B.A.	(RTL) *3
C0701	ECJ2VF1C105Z	CHIP CAPACITOR	ECUV1C105ZFN
C0702	F1H1H102A009	CHIP CAPACITOR	
C0703	F1J1A1050024	CHIP CAPACITOR	
C0704	ECJ2VB1H333K	CHIP CAPACITOR	
C0707	ECEA1HKA2R2B	ALU ELEC CAPACITOR	
C0708	ECEA1HKAR47B	ALU ELEC CAPACITOR	
C0710	F1H1H103A220	CHIP CAPACITOR	
C0711	ECEA1CKA220B	ALU ELEC CAPACITOR	
C0712	F1H1C104A008	CHIP CAPACITOR	
C0713	ECEA0JKA331Q	ALU ELEC CAPACITOR	
C0714	ECJ2VF1C105Z	CHIP CAPACITOR	ECUV1C105ZFN
C0715	ECJ1VC1H030C	CHIP CAPACITOR	*1,*3 ECUV1H030CCV
C0715	F1H1H120A230	CHIP CAPACITOR	*2
C0717	ECUV1H330GUV	CHIP CAPACITOR	
C0719	F1H1E104A030	CHIP CAPACITOR	ECUV1E104ZFV
C0721	ECJ1VC1H121J	CHIP CAPACITOR	*1 ECUV1H121JCV
C0721	F1H1H820A230	CHIP CAPACITOR	*2
C0721	ECJ1VC1H560J	CHIP CAPACITOR	*3 ECUV1H560JCV
C0724	ECJ1VB1H221K	CHIP CAPACITOR	*1,*3 ECUV1H221KBV
C0724	ECJ1VB1H331K	CHIP CAPACITOR	*2
C1002	EEUEB1E470SB	ALU ELEC CAPACITOR	
C1003	F1H1C104A071	CHIP CAPACITOR	
C1004	EEUEB1E470SB	ALU ELEC CAPACITOR	
C1008	F1H1C104A071	CHIP CAPACITOR	
C1009	F1H1C104A071	CHIP CAPACITOR	
C1011	EEUEB1E470SB	ALU ELEC CAPACITOR	
C1016	ECA1CHJ101B	ALU ELEC CAPACITOR	
C1018	F1H1C104A071	CHIP CAPACITOR	
C1019	F1H1C104A071	CHIP CAPACITOR	
C1020	F1H1C104A071	CHIP CAPACITOR	
C1025	ECUY1H104KBN	CHIP CAPACITOR	
C1026	ECUY1H104KBN	CHIP CAPACITOR	
C1027	F1H1C104A071	CHIP CAPACITOR	
C1028	EEUEB1E470SB	ALU ELEC CAPACITOR	
C1120	VCF2AAF683M	EMI CAPACITOR	⚠ ECQU2A683MVA
C1121	F1BAF1020020	CAPACITOR	⚠
C1123	F1BAF1020020	CAPACITOR	⚠
C1141	EEUEB2G330E	ALU ELEC CAPACITOR	
C1151	ECQB1H473JF3	PLAST FILM CAPACITOR	
C1152	ECQB1H103JF3	PLAST FILM CAPACITOR	
C1153	ECQV1H104JL3	PLAST FILM CAPACITOR	
C1154	ECQB1H223JF3	PLAST FILM CAPACITOR	
C1155	F1A3A271A028	CAPACITOR	
C1200	ECQV1H104JL3	PLAST FILM CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C1210	F1B3A332A004	CAPACITOR	
C1230	F2A1H2200032	ALU ELEC CAPACITOR	
C1250	F2A1E6810012	ALU ELEC CAPACITOR	
C1251	F2A1E101A122	ALU ELEC CAPACITOR	ECA1EM101B
C1260	F2A1A1220008	ALU ELEC CAPACITOR	
C1261	ECA1AHJ331B	ALU ELEC CAPACITOR	
C1270	F2A1H2200032	ALU ELEC CAPACITOR	
C1280	F2A1A1010072	ALU ELEC CAPACITOR	
C2501	ECJ1VB1C563K	CHIP CAPACITOR	ECUV1C563KBV
C2502	F1H1C104A071	CHIP CAPACITOR	
C2503	F1H1C104A008	CHIP CAPACITOR	
C2506	ECJ1VB1C563K	CHIP CAPACITOR	ECUV1C563KBV
C2507	ECJ1VB1C563K	CHIP CAPACITOR	ECUV1C563KBV
C2508	F1H1C104A071	CHIP CAPACITOR	
C2509	ECJ1VF1C474Z	CHIP CAPACITOR	ECUV1C474ZFV
C2510	F1H1H330A230	CHIP CAPACITOR	
C2511	ECEA0JKN220B	ALU ELEC CAPACITOR	
C2512	ECEA1EKA4R7B	ALU ELEC CAPACITOR	
C2513	ECJ1VB1H392K	CHIP CAPACITOR	ECUV1H392KBV
C2514	F1H1C104A008	CHIP CAPACITOR	
C2515	ECEA1VKN4R7B	ALU ELEC CAPACITOR	
C2516	ECEA1VKN4R7B	ALU ELEC CAPACITOR	
C2517	ECEA0JKA470B	ALU ELEC CAPACITOR	
C2518	ECUV1H473ZFV	CHIP CAPACITOR	ECJ1VF1H473Z
C2519	ECEA1EKA470B	ALU ELEC CAPACITOR	
C2520	ECJ1VB1C683K	CHIP CAPACITOR	
C2521	ECJ1VB1A154K	CHIP CAPACITOR	
C2522	ECJ1VB1A154K	CHIP CAPACITOR	
C2523	ECJ1VB1A154K	CHIP CAPACITOR	
C2524	ECEA1VKN4R7B	ALU ELEC CAPACITOR	
C3001	ECJ1VC1H151J	CHIP CAPACITOR	ECUV1H151JCV
C3002	F1H0J105A002	CHIP CAPACITOR	
C3003	F1H1C104A071	CHIP CAPACITOR	
C3005	F1H1H270A230	CHIP CAPACITOR	
C3006	F1H1C104A071	CHIP CAPACITOR	
C3007	ECJ1VF1A105Z	CHIP CAPACITOR	ECUV1A105ZFV
C3008	ECEA1HKA4R7B	ALU ELEC CAPACITOR	
C3009	ECJ1VF1A105Z	CHIP CAPACITOR	ECUV1A105ZFV
C3010	ECJ1VF1A105Z	CHIP CAPACITOR	ECUV1A105ZFV
C3011	F1H1H103A220	CHIP CAPACITOR	
C3012	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3013	F1H1C104A071	CHIP CAPACITOR	
C3014	F1H1C104A071	CHIP CAPACITOR	
C3015	F1H0J105A002	CHIP CAPACITOR	
C3016	F1H1C104A071	CHIP CAPACITOR	
C3017	F1H1C104A071	CHIP CAPACITOR	
C3019	F1H1C104A071	CHIP CAPACITOR	
C3020	ECEA1HKA3R3B	ALU ELEC CAPACITOR	
C3021	ECEA1CKA100B	ALU ELEC CAPACITOR	
C3023	F1H1H103A748	CHIP CAPACITOR	
C3024	ECJ1VC1H331J	CHIP CAPACITOR	ECUV1H331JCV
C3025	F1H1H103A220	CHIP CAPACITOR	
C3026	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3027	ECEA1HKA010B	ALU ELEC CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C3028	ECEA1HKA4R7B	ALU ELEC CAPACITOR	
C3029	ECEA1HKAR47B	ALU ELEC CAPACITOR	
C3030	F1H1E223A029	CHIP CAPACITOR	
C3031	F1H1C333A059	CHIP CAPACITOR	
C3032	ECEA1HKA3R3B	ALU ELEC CAPACITOR	
C3033	F1H1C104A071	CHIP CAPACITOR	
C3034	ECEA1HKA2R2B	ALU ELEC CAPACITOR	
C3035	F1H1E223A029	CHIP CAPACITOR	
C3036	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3037	F1H1H103A220	CHIP CAPACITOR	
C3038	ECJ1VC1H030C	CHIP CAPACITOR	ECUV1H030CCV
C3039	ECEA1HKA010B	ALU ELEC CAPACITOR	
C3040	F1H1H103A220	CHIP CAPACITOR	
C3041	F1H1H103A220	CHIP CAPACITOR	
C3042	ECJ1VF1A105Z	CHIP CAPACITOR	ECUV1A105ZFV
C3051	ECEA1CKA100B	ALU ELEC CAPACITOR	
C3053	F1H1H103A220	CHIP CAPACITOR	
C3054	F1H1H470A230	CHIP CAPACITOR	
C3058	F1H1C104A071	CHIP CAPACITOR	
C3060	ECJ1VC1H390J	CHIP CAPACITOR	
C3063	ECJ1VC1H471J	CHIP CAPACITOR	*1,*3 ECUV1H471JCV
C3064	F1H1H103A220	CHIP CAPACITOR	*1,*3
C3065	F1H1H103A220	CHIP CAPACITOR	*1,*3
C3066	F1H1H103A220	CHIP CAPACITOR	*1,*3
C3067	ECEA0JKA470B	ALU ELEC CAPACITOR	*1,*3
C3068	F1H1C104A008	CHIP CAPACITOR	*1,*3
C3069	F1H1H270A230	CHIP CAPACITOR	*1,*3
C3070	F1H1C104A071	CHIP CAPACITOR	
C3071	ECJ2VF1H104Z	CHIP CAPACITOR	ECUV1H104ZFN
C4001	ECEA0JKA101B	ALU ELEC CAPACITOR	
C4003	F1H1H472A219	CHIP CAPACITOR	
C4004	ECJ1VB1H122K	CHIP CAPACITOR	
C4005	ECEA0JKA220B	ALU ELEC CAPACITOR	
C4006	ECEA1EKA4R7B	ALU ELEC CAPACITOR	
C4008	ECEA1EKA3R3B	ALU ELEC CAPACITOR	
C4009	ECEA0JKA220B	ALU ELEC CAPACITOR	
C4011	ECJ1VB1H822K	CHIP CAPACITOR	ECUV1H822KBV
C4012	ECEA1HKA4R7B	ALU ELEC CAPACITOR	
C4013	F1H1H103A220	CHIP CAPACITOR	
C4014	ECEA0JKA470B	ALU ELEC CAPACITOR	
C4016	F1H1C104A071	CHIP CAPACITOR	
C4017	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4018	ECEA1HKA010B	ALU ELEC CAPACITOR	
C4019	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4020	F1H1H221A736	CHIP CAPACITOR	
C4021	ECQB1H223JF3	PLAST FILM CAPACITOR	
C4022	F1H1H152A219	CHIP CAPACITOR	
C4023	ECEA1AKA470B	ALU ELEC CAPACITOR	
C4024	F1H1E223A029	CHIP CAPACITOR	
C4025	ECEA1AKA220B	ALU ELEC CAPACITOR	
C4026	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4501	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4502	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4503	ECEA1CKA100B	ALU ELEC CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C4504	ECQB1H473JF3	PLAST FILM CAPACITOR	
C4505	ECEA1AKA330B	ALU ELEC CAPACITOR	
C4506	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4507	ECEA1CKA220B	ALU ELEC CAPACITOR	
C4508	ECQB1H153JF3	PLAST FILM CAPACITOR	
C4509	F1H1C333A059	CHIP CAPACITOR	
C4511	F1H1H103A748	CHIP CAPACITOR	
C4514	F1H1H103A748	CHIP CAPACITOR	
C4515	ECEA0JKA101B	ALU ELEC CAPACITOR	
C4516	F1H1C104A008	CHIP CAPACITOR	
C4517	F1H1C104A071	CHIP CAPACITOR	
C4519	F1H1A224A028	CHIP CAPACITOR	
C4520	ECQB1H153JF3	PLAST FILM CAPACITOR	
C4521	ECEA0JKS220B	ALU ELEC CAPACITOR	
C4522	ECEA1CKS100B	ALU ELEC CAPACITOR	
C4523	ECEA1AKS330B	ALU ELEC CAPACITOR	
C4524	ECQB1H473JF3	PLAST FILM CAPACITOR	
C4525	ECEA0JKA101B	ALU ELEC CAPACITOR	
C4526	F1H1C104A008	CHIP CAPACITOR	
C4529	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4530	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4531	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4532	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4533	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4534	ECEA1CKA470B	ALU ELEC CAPACITOR	
C4535	ECEA1CKA100B	ALU ELEC CAPACITOR	
C4536	ECEA1CKA220B	ALU ELEC CAPACITOR	
C4538	F1H1C104A071	CHIP CAPACITOR	
C4539	F1H1C104A008	CHIP CAPACITOR	
C4540	F1H1C104A071	CHIP CAPACITOR	
C4541	F1H1C104A071	CHIP CAPACITOR	
C4544	F1H1H101A736	CHIP CAPACITOR	
C4545	F1H1H101A736	CHIP CAPACITOR	
C4901	F1H1H103A748	CHIP CAPACITOR	
C4902	ECJ2YB0J475K	CHIP CAPACITOR	
C4903	F1H1C104A008	CHIP CAPACITOR	
C4904	F1H1H470A230	CHIP CAPACITOR	
C4905	F1H1H470A230	CHIP CAPACITOR	
C4906	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4907	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4908	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4909	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4910	F1H1C104A071	CHIP CAPACITOR	
C4911	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4912	F1H1H470A230	CHIP CAPACITOR	
C4913	F1H1H470A230	CHIP CAPACITOR	
C4914	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4915	F1H1H101A736	CHIP CAPACITOR	
C4916	F1H1H101A736	CHIP CAPACITOR	
C4917	F1H1C104A071	CHIP CAPACITOR	
C4918	F1H1H103A748	CHIP CAPACITOR	
C4919	F1H1C104A071	CHIP CAPACITOR	
C4920	F1H1C104A071	CHIP CAPACITOR	
C4921	ECEA0JKA331Q	ALU ELEC CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C4922	ECEA1HKA010B	ALU ELEC CAPACITOR	
C4923	ECEA0JKA331Q	ALU ELEC CAPACITOR	
C4924	F1H1C104A071	CHIP CAPACITOR	
C4925	F1H1C104A071	CHIP CAPACITOR	
C4926	F1H1H103A748	CHIP CAPACITOR	
C4927	F1H1H103A748	CHIP CAPACITOR	
C4928	F1H1C104A071	CHIP CAPACITOR	
C4929	F1H1H103A748	CHIP CAPACITOR	
C4930	F1H1C104A071	CHIP CAPACITOR	
C4931	F1H1C104A071	CHIP CAPACITOR	
C4932	F1H1C104A071	CHIP CAPACITOR	
C4933	F1H1H103A748	CHIP CAPACITOR	
C4934	F1H1C104A071	CHIP CAPACITOR	
C4935	F1H1H103A220	CHIP CAPACITOR	
C4936	F1H1C104A071	CHIP CAPACITOR	
C4943	F1H1C104A071	CHIP CAPACITOR	
C4952	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4953	F1H1H470A230	CHIP CAPACITOR	
C4954	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C4955	F1H1H470A230	CHIP CAPACITOR	
C4956	F1H1H103A748	CHIP CAPACITOR	
C4957	ECEA0JKA331Q	ALU ELEC CAPACITOR	
C4958	F1H1C104A008	CHIP CAPACITOR	
C5001	F1H1H103A748	CHIP CAPACITOR	
C5002	F1H1H103A748	CHIP CAPACITOR	
C5003	F1H1H103A748	CHIP CAPACITOR	
C5004	F1H1H103A748	CHIP CAPACITOR	
C5005	F1H1C104A071	CHIP CAPACITOR	
C5006	ECEA0JKA470B	ALU ELEC CAPACITOR	
C5007	F1H1C104A008	CHIP CAPACITOR	
C6001	ECEA0JKA470B	ALU ELEC CAPACITOR	
C6003	ECJ1VC1H471J	CHIP CAPACITOR	ECUV1H471JCV
C6004	F1H1H103A220	CHIP CAPACITOR	
C6005	F1H1H103A220	CHIP CAPACITOR	
C6009	F1H1H180A230	CHIP CAPACITOR	
C6010	F1H1H180A230	CHIP CAPACITOR	
C6011	F1H1H180A230	CHIP CAPACITOR	
C6012	F1H1H150A230	CHIP CAPACITOR	
C6015	ECEA1CKA100B	ALU ELEC CAPACITOR	
C6016	F1H1H103A220	CHIP CAPACITOR	
C6017	ECJ1VC1H681J	CHIP CAPACITOR	ECUV1H681JCV
C6022	F1H1H221A736	CHIP CAPACITOR	
C6023	ECJ1VF1A105Z	CHIP CAPACITOR	ECUV1A105ZFV
C6024	ECEA0JKA221B	ALU ELEC CAPACITOR	
C6025	F1H1C104A008	CHIP CAPACITOR	
C6027	F1H1C333A059	CHIP CAPACITOR	
C6028	F1H1H222A219	CHIP CAPACITOR	
C6029	ECJ1VF1C474Z	CHIP CAPACITOR	ECUV1C474ZFV
C6030	ECJ1VC1H151J	CHIP CAPACITOR	ECUV1H151JCV
C6031	F1H1C104A008	CHIP CAPACITOR	
C6032	ECEA0JKA470B	ALU ELEC CAPACITOR	
C6035	F1H0J105A002	CHIP CAPACITOR	
C6036	ECJ1VC1H561J	CHIP CAPACITOR	
C6038	ECJ1VC1H220J	CHIP CAPACITOR	ECUV1H220JCV

Ref. No.	Part No.	Part Name & Description	Remarks
C6039	ECJ1VC1H220J	CHIP CAPACITOR	ECUV1H220JCV
C6040	ECJ1VF1H104Z	CHIP CAPACITOR	
C6041	ECJ1VF1H104Z	CHIP CAPACITOR	
C6042	ECJ1VF1H104Z	CHIP CAPACITOR	
C7501	F1H1H103A220	CHIP CAPACITOR	
C7502	ECEA1HKA100B	ALU ELEC CAPACITOR	
C7503	F1H1H120A230	CHIP CAPACITOR	
C7504	ECEA0JKA101B	ALU ELEC CAPACITOR	
C7507	F4D55473A005	ALU ELEC CAPACITOR	VCE0073-T
C7508	ECEA0JKA221B	ALU ELEC CAPACITOR	
C7509	ECUV1H682KBV	CHIP CAPACITOR	ECJ1VB1H682K
C7510	F1H1H103A220	CHIP CAPACITOR	
C7511	F1H1C104A008	CHIP CAPACITOR	
C7603	ECEA0JKA101B	ALU ELEC CAPACITOR	
C7604	ECEA0JKA101B	ALU ELEC CAPACITOR	
C7605	F1H1H103A220	CHIP CAPACITOR	
C7607	ECEA1HKA010B	ALU ELEC CAPACITOR	
C7609	F1H1H330A230	CHIP CAPACITOR	
C7610	F1H1H330A230	CHIP CAPACITOR	
C7611	F1H1H330A230	CHIP CAPACITOR	
C7612	ECJ1VF1H104Z	CHIP CAPACITOR	
C7614	ECEA0JKA101B	ALU ELEC CAPACITOR	
C7615	F1H1H103A220	CHIP CAPACITOR	
C7617	F1H1H103A220	CHIP CAPACITOR	*1,*3
C7619	F1H1C104A071	CHIP CAPACITOR	*3
C7621	ECEA1HKA2R2B	ALU ELEC CAPACITOR	
C7622	F1H1C104A071	CHIP CAPACITOR	
C7624	F1H1C104A071	CHIP CAPACITOR	
C7625	F1H1H103A220	CHIP CAPACITOR	
C7628	F1H1C104A071	CHIP CAPACITOR	
C7630	ERJ3GEYJ822V	CHIP RESISTOR	ERJ3GSJ822V
C7631	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
C7634	F1H1H101A736	CHIP CAPACITOR	
C7635	ECEA0JKA470B	ALU ELEC CAPACITOR	
C7638	F1H1C104A071	CHIP CAPACITOR	
C7641	F1H1C104A071	CHIP CAPACITOR	
C7642	F1H1C104A071	CHIP CAPACITOR	
C7645	ECEA1CKA100B	ALU ELEC CAPACITOR	
C7646	ECEA1CKA100B	ALU ELEC CAPACITOR	
C7647	ECEA0JKA101B	ALU ELEC CAPACITOR	
C7648	F1H1H103A748	CHIP CAPACITOR	
C7651	ECEA1CKA100B	ALU ELEC CAPACITOR	
C7653	ECJ1VC1H100D	CHIP CAPACITOR	
C7654	ECJ1VC1H100D	CHIP CAPACITOR	
D0702	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
D1002	MAZ4056NHF	DIODE	MA4056N-HTA
D1003	MAZ4130NLF	DIODE	MA4130N-LTA
D1004	B0EAKL000031	DIODE	
D1005	MAZ4056NHF	DIODE	MA4056N-HTA
D1008	B0EAKL000031	DIODE	
D1009	MAZ40330HF	DIODE	
D1010	B0EADD000002	DIODE	1SS119-04TJ
D1011	MAZ4051NMF	DIODE	MA4051N-MTA

Ref. No.	Part No.	Part Name & Description	Remarks
D1012	B0EADD000002	DIODE	1SS119-04TJ
D1110	ERZVA5V471	SURGE ABSORBER	⚠
D1140	B0KB00000013	DIODE	
D1150	B0HAGM000006	DIODE	
D1152	MA2C18500E	DIODE (WHITE/GREEN)	MA185TA5
D1155	B0EADD000002	DIODE	1SS119-04TJ
D1157	MAZ40270LF	DIODE	
D1180	MAZ751000C	DIODE	
D1230	MA2C18500E	DIODE (WHITE/GREEN)	MA185TA5
D1250	B0JAMK000015	DIODE	
D1251	B0JAMK000015	DIODE	
D1262	B0JAPE000008	DIODE	
D1270	MA2C18500E	DIODE (WHITE/GREEN)	MA185TA5
D1280	B0JAME000025	DIODE (AK04V2)	11EQS04TA1
D1501	B3EA00000040	DIODE	SIR505STA47
D2501	B0EADD000002	DIODE	1SS119-04TJ
D2502	B0EADD000002	DIODE	1SS119-04TJ
D4502	B0EADD000002	DIODE	1SS119-04TJ
D4901	MAZ4075NMF	DIODE	MA4075N-MTA
D4902	MAZ4075NMF	DIODE	MA4075N-MTA
D4903	B0EADD000002	DIODE	1SS119-04TJ
D6004	B0ACCK000005	DIODE	1SS355TE-17
D7501	MAZ4240NMF	DIODE	
D7503	B0JACE000001	DIODE	RB441PT-77
D7601	MAZ43000MF	DIODE	MA4300-MTA
DP7501	A2BA00000212	DISPLAY (VCR)	
F1101	K5D162BL0007	MINIATURE FUSE	⚠ K5Y162B00002, VSF0244C16
IC0701	C1AA00000606	IC	
IC1200	C0DAEJC00003	INTEGRATED CIRCUIT	UPC1093J-T
IC1501	B3EZ00000001	INTEGRATED CIRCUIT	RPI354N
IC1502	B3EZ00000001	INTEGRATED CIRCUIT	RPI354N
IC2501	AN3811NK-P	CYLINDER DRIVE IC	
IC3001	C1AB00001742	INTEGRATED CIRCUIT	
IC3002	C1AB00001340	INTEGRATED CIRCUIT	*1,*3
IC4501	AN3656NFBPBV	INTEGRATED CIRCUIT	
IC4901	C1AB00000601	INTEGRATED CIRCUIT	
IC4902	C1AB00001614	INTEGRATED CIRCUIT	
IC6001	C2CBJG000262	INTEGRATED CIRCUIT	
IC6002	C3EAGC000015	EEPROM	M24C16-WBN6
IC6003	C1AB00001293	INTEGRATED CIRCUIT	SDA5650X
IC7501	C0HBB0000023	INTEGRATED CIRCUIT	M35502AFP-E1
IC7503	C0EBE0000211	INTEGRATED CIRCUIT	
IC7504	C0EBH0000218	INTEGRATED CIRCUIT	
IC7601	C0EAH0000051	INTEGRATED CIRCUIT	PST7043-T
IC7602	C1AB00001404	INTEGRATED CIRCUIT	TDA9874AH
JK4901	K1FB121B0003	CONNECTOR	
JK4902	K1FB121B0003	CONNECTOR	
JK4903	K2HZ105B0007	CONNECTOR	
JK4904	K2HA304B0005	LINE OUT TERMINAL	

Ref. No.	Part No.	Part Name & Description	Remarks
K0701	ECJ1VC1H560J	CHIP CAPACITOR	*1 ECUV1H560JCV
K0703	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K0707	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K0709	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K3003	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K3024	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K3025	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K3027	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K3028	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K4502	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K4911	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K4912	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K5005	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K6005	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K6006	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
K7611	J0JBC0000041	BEAD CORE	*3 VLP0147-T
K7613	ERJ6GEY0R00Z	CHIP RESISTOR	*3 ERJ6GEY0R00V
K7615	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
L0701	ELJNAR27JF	CHIP INDUCTOR	*1,*3
L0701	ELJNAR22JF	CHIP INDUCTOR	*2
L0703	ELJNA2R2JF	CHIP INDUCTOR	*1,*3
L0703	ELJNA1R8JF	CHIP INDUCTOR	*2
L1120	ELF15N003AB	LINE FILTER	⚠ ELF15N003A
L1121	ELF15N005AB	LINE FILTER	⚠ ELF15N005A
L1250	G0A220G00018	FIXED INDUCTOR	
L1260	G0A220G00018	FIXED INDUCTOR	
L2501	G0C680JA0019	CHOKE COIL AXIAL	VLQ0599J680T
L3002	G0C820JA0019	CHOKE COIL AXIAL	
L3003	G0C270JA0019	CHOKE COIL AXIAL	VLQ0599J270T
L3004	G0C680JA0019	CHOKE COIL AXIAL	VLQ0599J680T
L3005	G0C270JA0019	CHOKE COIL AXIAL	VLQ0599J270T
L3006	G1C120J00001	FIXED INDUCTOR	
L3010	G0C390JA0019	CHOKE COIL AXIAL	VLQ0599J390T
L3014	G0C680JA0019	CHOKE COIL AXIAL	*1,*3 VLQ0599J680T
L3015	G1C470J00001	CHIP INDUCTOR	*1,*3
L3016	G1C180J00001	CHIP INDUCTOR	*1,*3
L4001	----------	JUMPER WIRE	
L4002	G0C680JA0019	CHOKE COIL AXIAL	VLQ0599J680T
L4501	G0C1R2J00004	CHOKE COIL AXIAL	VLQ0599J1R2T
L4502	G0C1R2J00004	CHOKE COIL AXIAL	VLQ0599J1R2T
L4503	G0C100JA0019	CHOKE COIL AXIAL	ELEXT100JBV
L4503	G0C100JA0019	CHOKE COIL AXIAL	VLQ0599J100T
L4901	G0CR22JA0019	CHOKE COIL AXIAL	VLQ0599JR22T
L4902	G0C330JA0019	CHOKE COIL AXIAL	VLQ0599J330T
L4903	G0C330JA0019	CHOKE COIL AXIAL	VLQ0599J330T
L5001	G0C680JA0019	CHOKE COIL AXIAL	VLQ0599J680T
L6001	G0C101JA0019	CHOKE COIL AXIAL	ELEXT101JBV
L6001	G0C101JA0019	CHOKE COIL AXIAL	VLQ0599J101T
L6005	----------	JUMPER WIRE	
L6006	G0C680JA0019	CHOKE COIL AXIAL	VLQ0599J680T
L7601	G0C270JA0019	CHOKE COIL AXIAL	VLQ0599J270T
L7602	G0C270JA0019	CHOKE COIL AXIAL	VLQ0599J270T
L7603	G0C270JA0019	CHOKE COIL AXIAL	VLQ0599J270T

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
L7605	G0C2R2JA0019	CHOKE COIL AXIAL	VLQ0599J2R2T
L7606	----------	JUMPER WIRE	
L7607	G0C2R2JA0019	CHOKE COIL AXIAL	VLQ0599J2R2T
L7608	G0C1R0JA0019	CHOKE COIL AXIAL	VLQ0599J1R0T
L7609	----------	JUMPER WIRE	
LB0701	J0JBC0000041	BEAD CORE	*3 VLP0147-T
LB1213	J0JHC0000070	BEAD CORE	
LB4001	J0JBC0000070	CHIP INDUCTOR	
LB4002	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
LB4003	J0JBC0000070	CHIP INDUCTOR	
LB4004	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
LB4901	J0JBC0000041	BEAD CORE	VLP0147-T
LB4902	J0JBC0000041	BEAD CORE	VLP0147-T
LB4903	J0JBC0000041	BEAD CORE	VLP0147-T
LB4904	J0JBC0000041	BEAD CORE	VLP0147-T
LB4905	J0JBC0000041	BEAD CORE	VLP0147-T
LB4906	J0JBC0000041	BEAD CORE	VLP0147-T
LB4907	J0JBC0000041	BEAD CORE	VLP0147-T
LB4908	J0JBC0000041	BEAD CORE	VLP0147-T
LB4909	J0JBC0000041	BEAD CORE	VLP0147-T
LB4910	J0JBC0000041	BEAD CORE	VLP0147-T
LB4911	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
LB4912	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
LB4913	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
LB5003	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
LB5004	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
LB6001	J0JBC0000041	BEAD CORE	VLP0147-T
LB7601	J0JCC0000080	BEAD CORE	
LB7603	J0JCC0000124	BEAD CORE	
LB7604	J0JCC0000124	BEAD CORE	
LR1150	J1ZZA0000001	BEAD CORE	
P1101	K2AA2K000012	AC INLET	⚠
P1501	K1KB02A00035	CONNECTOR	VJS3837A002
P2501	K1KA12A00127	CONNECTOR	VJP3835E012
P2502	K1MN09A00023	CONNECTOR	
P4001	K1KB02A00035	CONNECTOR	VJS3837A002
P4002	K1MN06A00035	CONNECTOR	
P5001	K1MN10A00037	CONNECTOR	
PK0701	K1MR09A00028	CONNECTOR	
PP0701	K1KA04B00135	CONNECTOR	
PP3001	K1KA13A00042	CONNECTOR	
PP3002	K1KA18A00046	CONNECTOR	
PP3901	K1KA15A00064	CONNECTOR	VJP3042G015W
Q0702	2SD0601ASL	TRANSISTOR	
Q1001	2SD0602ARL	TRANSISTOR	2SD602A-RTX
Q1002	B1AAGD000006	TRANSISTOR	
Q1003	2SB0710ARL	TRANSISTOR	2SB710A-RTX
Q1005	B1AAGD000006	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q1006	B1AAGD000006	TRANSISTOR	
Q1007	B1AAGD000006	TRANSISTOR	
Q1008	B1AAGD000006	TRANSISTOR	
Q1009	B1AAGD000006	TRANSISTOR	
Q1010	B1AAGD000006	TRANSISTOR	
Q1012	B1AAGD000006	TRANSISTOR	
Q1013	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q1150	B1DEDR000003	TRANSISTOR	
Q1151	2SD1992ARA	TRANSISTOR	
Q1152	2SC3311ASA	TRANSISTOR	2SC3311ARA
Q1153	B1DEDQ000014	TRANSISTOR	
Q1200	B3PBA0000078	PHOTO COUPLER	⚠ PC123ZY2
Q1501	PNB2301MBV	TRANSISTOR	
Q1502	PNB2301MAV	TRANSISTOR	
Q3001	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q3006	2SD0601ARN	TRANSISTOR	*1,*3 2SD601A-RTX
Q3007	XN0650100L	MULTI.DIG.TRANSISTOR	XN6501-TX
Q4003	2SD114900L	TRANSISTOR	2SD1149-TX
Q4004	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q4005	2SD0602ARL	TRANSISTOR	2SD602A-RTX
Q4006	2SB0710ARL	TRANSISTOR	2SB710A-RTX
Q4901	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q4902	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q4903	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q4904	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q4905	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q4906	2SD13280SL	TRANSISTOR	2SD1328-STX
Q6004	2SB0709ARL	TRANSISTOR	2SB709A-RTX
Q6008	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q6009	2SD0601ARN	TRANSISTOR	2SD601A-RTX
Q6010	2SB0709ARL	TRANSISTOR	2SB709A-RTX
QR1003	UNR211200L	TRANSISTOR	
QR1004	B1GDCFJJ0002	TRANSISTOR	DTA114EK-T146
QR1005	UNR221100L	TRANSISTOR	UN2211-TX
QR3003	UNR221300L	TRANSISTOR	
QR3006	B1GBCFLL0002	TRANSISTOR	DTC124EK-T146
QR3007	UNR221300L	TRANSISTOR	
QR4001	UNR221100L	TRANSISTOR	UN2211-TX
QR4002	B1GDCFJJ0002	TRANSISTOR	DTA114EK-T146
QR4005	B1GBCFLL0002	TRANSISTOR	DTC124EK-T146
QR4501	UNR211300L	TRANSISTOR	UN2113-TX
QR4502	UNR211300L	TRANSISTOR	UN2113-TX
QR4503	XN0121600L	MULTI.DIG.TRANSISTOR	
QR4504	XN0121600L	MULTI.DIG.TRANSISTOR	
QR4507	B1GBCFGA0002	TRANSISTOR	DTC143TK-T146
QR4901	B1GBCFJA0002	TRANSISTOR	DTC114TK-T146
QR4902	B1GBCFLL0002	TRANSISTOR	DTC124EK-T146
QR6001	B1GBCFJA0002	TRANSISTOR	DTC114TK-T146
QR6004	UNR221100L	TRANSISTOR	UN2211-TX
R0701	ERJ6GEYJ104V	CHIP RESISTOR	*2
R0705	ERJ3GEYJ472V	CHIP RESISTOR	ERJ3GSJ472V
R0707	ERJ3GEYJ393V	CHIP RESISTOR	ERJ3GSJ393V

Ref. No.	Part No.	Part Name & Description	Remarks
R0708	ERJ3GEYJ332V	CHIP RESISTOR	ERJ3GSJ332V
R0709	ERJ6GEYJ104V	CHIP RESISTOR	*3
R0711	ERJ3GEYJ181V	CHIP RESISTOR	
R0713	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
R0714	ERJ3GEYJ562V	CHIP RESISTOR	*3 ERJ3GSJ562V
R0715	ERJ3GEYJ223V	CHIP RESISTOR	ERJ3GSJ223V
R0717	ERJ3GEYJ471V	CHIP RESISTOR	ERJ3GSJ471V
R0719	ERJ3GEYJ472V	CHIP RESISTOR	ERJ3GSJ472V
R0725	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R0727	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
R0728	ERJ3GEY0R00V	CHIP RESISTOR	*2 ERJ3GS0R00V
R0729	ERJ3GEYJ103V	CHIP RESISTOR	*1,*2 ERJ3GSJ103V
R0730	ERJ6GEYJ103V	CHIP RESISTOR	*1
R0731	ERJ3GEYJ101V	CHIP RESISTOR	*3 ERJ3GSJ101V
R0732	ERJ3GEYJ472V	CHIP RESISTOR	*3 ERJ3GSJ472V
R0740	ERJ3GEYG471V	CHIP RESISTOR	*1,*2
R0740	ERJ3GEYG271V	CHIP RESISTOR	*3
R0741	ERJ3GEYJ221V	CHIP RESISTOR	ERJ3GSJ221V
R0742	ERJ8GEYJ151V	CHIP RESISTOR	
R0745	ERJ6GEYJ335V	CHIP RESISTOR	
R1001	ERJ6GEYJ333V	CHIP RESISTOR	
R1003	ERJ6GEYJ273V	CHIP RESISTOR	
R1004	ERDS2TJ102T	CARBON RESISTOR	
R1005	ERJ6GEYJ562V	CHIP RESISTOR	
R1006	ERJ6GEYJ562V	CHIP RESISTOR	
R1008	ERDS2TJ471T	CARBON RESISTOR	
R1009	ERDS2TJ471T	CARBON RESISTOR	
R1013	ERDS2TJ103T	CARBON RESISTOR	
R1014	ERJ6GEYJ472V	CHIP RESISTOR	
R1015	ERDS2TJ103T	CARBON RESISTOR	
R1016	ERJ6GEYJ103V	CHIP RESISTOR	
R1017	ERJ6GEYJ103V	CHIP RESISTOR	
R1022	ERDS2TJ151T	CARBON RESISTOR	
R1024	ERJ6GEYJ562V	CHIP RESISTOR	
R1025	ERDS2TJ151T	CARBON RESISTOR	
R1026	ERJ6GEYJ682V	CHIP RESISTOR	
R1027	ERDS2TJ332T	CARBON RESISTOR	
R1028	ERDS2TJ332T	CARBON RESISTOR	
R1150	ERDS2TJ105T	CARBON RESISTOR	
R1153	ERG2SJ331E	METAL OXIDE RESISTOR	
R1154	ERDS2TJ105T	CARBON RESISTOR	
R1155	ERDS2TJ104T	CARBON RESISTOR	
R1156	ERDS2TJ330T	CARBON RESISTOR	
R1157	EROS2TKG1801	METAL OXIDE RESISTOR	
R1158	ERDS2TJ331T	CARBON RESISTOR	
R1159	ERDS2TJ3R3T	CARBON RESISTOR	
R1160	ERX1SJR51E	METAL RESISTOR	
R1161	ERDS2TJ101T	CARBON RESISTOR	
R1162	ERDS2FJ102T	CARBON RESISTOR	
R1163	ERDS2FJ101T	CARBON RESISTOR	
R1200	ERJ6GEYG393V	CHIP RESISTOR	
R1202	ERJ6GEYG222V	CHIP RESISTOR	
R1203	ERJ6GEYG333V	CHIP RESISTOR	
R1204	ERJ6GEYJ123V	CHIP RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R1205	ERJ6GEYJ222V	CHIP RESISTOR	
R1206	ERJ6GEYJ271V	CHIP RESISTOR	
R1207	ERJ6GEYG333V	CHIP RESISTOR	
R1208	ERJ6GEYG822V	CHIP RESISTOR	
R1209	ERJ6GEYG563V	CHIP RESISTOR	
R1501	ERDS2TJ121T	CARBON RESISTOR	
R1502	ERDS2TJ181T	CARBON RESISTOR	
R1503	ERJ6GEYJ273V	CHIP RESISTOR	
R1504	ERJ6GEYJ273V	CHIP RESISTOR	
R1505	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R1506	ERJ6GEYJ103V	CHIP RESISTOR	
R2501	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R2502	ERJ6GEYJ222V	CHIP RESISTOR	
R2503	ERJ6GEYJ103V	CHIP RESISTOR	
R2504	ERJ6GEYJ103V	CHIP RESISTOR	
R2505	ERJ6GEYJ392V	CHIP RESISTOR	
R2506	ERJ6GEYJ105V	CHIP RESISTOR	
R2507	ERJ6GEYJ274V	CHIP RESISTOR	
R2508	ERJ6GEYG433V	CHIP RESISTOR	
R2509	ERDS2TJ331T	CARBON RESISTOR	
R2510	ERDS2TJ330T	CARBON RESISTOR	
R2511	ERDS2TJ330T	CARBON RESISTOR	
R2512	ERJ6GEYJ102V	CHIP RESISTOR	
R2515	ERDS2TJ330T	CARBON RESISTOR	
R2516	ERJ6GEYJ1R5V	CHIP RESISTOR	
R2517	ERJ6GEYJ1R2V	CHIP RESISTOR	
R3001	ERJ6GEYJ152V	CHIP RESISTOR	
R3002	ERJ6GEYJ622V	CHIP RESISTOR	
R3004	ERJ6GEYJ562V	CHIP RESISTOR	
R3005	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R3006	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R3008	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R3009	ERJ6GEYJ153V	CHIP RESISTOR	
R3010	ERJ6GEYJ103V	CHIP RESISTOR	
R3011	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R3012	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R3013	ERJ6GEYJ273V	CHIP RESISTOR	
R3014	ERJ6GEYJ471V	CHIP RESISTOR	
R3015	ERJ6GEYJ332V	CHIP RESISTOR	
R3017	ERJ6GEYJ102V	CHIP RESISTOR	
R3027	ERJ6GEYJ332V	CHIP RESISTOR	
R3028	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R3030	ERJ6GEYJ106V	CHIP RESISTOR	
R3032	ERJ6GEYJ221V	CHIP RESISTOR	
R3033	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R3037	ERJ6GEYJ122V	CHIP RESISTOR	
R3038	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R3039	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R3040	ERJ6GEYJ472V	CHIP RESISTOR	
R3041	ERJ6GEYJ102V	CHIP RESISTOR	*1,*3
R3042	ERJ6GEYJ222V	CHIP RESISTOR	*1,*3
R3043	ERJ6GEYJ182V	CHIP RESISTOR	*1,*3
R3044	ERJ6GEYJ102V	CHIP RESISTOR	*1,*3
R3045	ERJ6GEYJ102V	CHIP RESISTOR	*1,*3

Ref. No.	Part No.	Part Name & Description	Remarks
R3046	ERJ6GEYJ471V	CHIP RESISTOR	*1,*3
R3047	ERJ6RBD183V	CHIP RESISTOR	
R3048	ERJ6RBD273V	CHIP RESISTOR	
R4001	ERJ6GEYJ332V	CHIP RESISTOR	
R4002	ERJ6GEYJ104V	CHIP RESISTOR	
R4003	ERJ6GEYJ223V	CHIP RESISTOR	
R4004	ERJ6GEYJ221V	CHIP RESISTOR	
R4006	ERJ6GEYJ223V	CHIP RESISTOR	
R4007	ERJ6GEYJ103V	CHIP RESISTOR	
R4008	ERJ6GEYJ334V	CHIP RESISTOR	
R4009	ERJ6GEYJ333V	CHIP RESISTOR	
R4010	ERJ6GEYJ103V	CHIP RESISTOR	
R4011	ERJ6GEYJ243V	CHIP RESISTOR	
R4012	ERJ6GEYJ821V	CHIP RESISTOR	
R4013	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R4014	ERJ6GEYJ163V	CHIP RESISTOR	
R4015	ERJ6GEYJ472V	CHIP RESISTOR	
R4016	ERJ6GEYJ222V	CHIP RESISTOR	
R4017	ERJ6GEYJ332V	CHIP RESISTOR	
R4018	ERJ6GEYJ472V	CHIP RESISTOR	
R4019	ERJ6GEYJ682V	CHIP RESISTOR	
R4020	ERJ6GEYJ472V	CHIP RESISTOR	
R4501	ERJ6GEYJ563V	CHIP RESISTOR	
R4502	ERJ6GEYJ563V	CHIP RESISTOR	
R4503	ERJ6GEYJ303V	CHIP RESISTOR	
R4504	ERJ6GEYJ303V	CHIP RESISTOR	
R4505	ERJ6GEYJ472V	CHIP RESISTOR	
R4506	ERJ6GEYJ472V	CHIP RESISTOR	
R4507	ERJ6GEYJ153V	CHIP RESISTOR	
R4508	ERJ6GEYJ472V	CHIP RESISTOR	
R4509	ERJ6GEYJ472V	CHIP RESISTOR	
R4510	ERJ6GEYJ153V	CHIP RESISTOR	
R4511	ERJ6GEYJ472V	CHIP RESISTOR	
R4512	ERJ6GEYJ472V	CHIP RESISTOR	
R4513	ERJ6GEYJ563V	CHIP RESISTOR	
R4514	ERJ6GEYJ563V	CHIP RESISTOR	
R4515	ERJ6GEYJ563V	CHIP RESISTOR	
R4516	ERJ6GEYJ563V	CHIP RESISTOR	
R4517	ERJ6GEYJ511V	CHIP RESISTOR	
R4518	ERJ6GEYJ472V	CHIP RESISTOR	
R4519	ERJ6GEYJ821V	CHIP RESISTOR	
R4520	ERJ6GEYJ124V	CHIP RESISTOR	
R4521	ERJ6GEYJ472V	CHIP RESISTOR	
R4522	ERJ6GEYJ511V	CHIP RESISTOR	
R4523	ERJ6GEYJ102V	CHIP RESISTOR	
R4524	ERJ6GEYJ303V	CHIP RESISTOR	
R4525	ERJ6GEYJ102V	CHIP RESISTOR	
R4526	ERJ6GEYJ102V	CHIP RESISTOR	
R4527	ERJ6GEYJ223V	CHIP RESISTOR	
R4531	ERJ6GEYJ221V	CHIP RESISTOR	
R4533	ERJ6GEYJ221V	CHIP RESISTOR	
R4535	ERJ6GEYJ221V	CHIP RESISTOR	
R4537	ERJ6GEYJ103V	CHIP RESISTOR	
R4538	ERJ6GEYJ221V	CHIP RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R4539	ERJ6GEYJ362V	CHIP RESISTOR	
R4540	ERJ6GEYJ223V	CHIP RESISTOR	
R4543	ERJ6GEYJ221V	CHIP RESISTOR	
R4901	ERJ6GEYJ331V	CHIP RESISTOR	
R4902	ERJ6GEYJ121V	CHIP RESISTOR	
R4903	ERJ6GEYJ121V	CHIP RESISTOR	
R4905	ERJ6GEYJ750V	CHIP RESISTOR	
R4906	ERJ6GEYJ750V	CHIP RESISTOR	
R4907	ERJ6GEYJ750V	CHIP RESISTOR	
R4909	ERJ6GEYJ750V	CHIP RESISTOR	
R4910	ERJ6GEYJ750V	CHIP RESISTOR	
R4911	ERJ6GEYJ750V	CHIP RESISTOR	
R4912	ERJ6GEYJ103V	CHIP RESISTOR	
R4913	ERJ6GEYJ103V	CHIP RESISTOR	
R4914	ERJ6GEYJ223V	CHIP RESISTOR	
R4915	ERJ6GEYJ183V	CHIP RESISTOR	
R4916	ERDS2TJ471T	CARBON RESISTOR	
R4917	ERJ6GEYJ223V	CHIP RESISTOR	
R4918	ERJ6GEYJ153V	CHIP RESISTOR	
R4919	ERJ6GEYJ474V	CHIP RESISTOR	
R4920	ERJ6GEYJ472V	CHIP RESISTOR	
R4921	ERJ6GEYJ472V	CHIP RESISTOR	
R4922	ERJ6GEYJ472V	CHIP RESISTOR	
R4923	ERJ6GEYJ681V	CHIP RESISTOR	
R4924	ERJ6GEYJ681V	CHIP RESISTOR	
R4925	ERJ6GEYJ472V	CHIP RESISTOR	
R4926	ERJ6GEYJ183V	CHIP RESISTOR	
R4932	ERJ6GEYJ750V	CHIP RESISTOR	
R4933	ERJ6GEYJ750V	CHIP RESISTOR	
R4934	ERJ6GEYJ750V	CHIP RESISTOR	
R4935	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R4936	ERJ6GEYJ102V	CHIP RESISTOR	
R4937	ERJ6GEYJ102V	CHIP RESISTOR	
R6001	ERJ6GEYJ472V	CHIP RESISTOR	
R6002	ERJ6GEYJ102V	CHIP RESISTOR	
R6003	ERJ6GEYJ391V	CHIP RESISTOR	
R6004	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R6005	ERJ6GEYJ224V	CHIP RESISTOR	
R6007	ERJ6GEYJ473V	CHIP RESISTOR	
R6009	ERJ6GEYJ223V	CHIP RESISTOR	
R6011	ERJ6GEYJ221V	CHIP RESISTOR	
R6012	ERJ6GEYJ221V	CHIP RESISTOR	
R6013	ERJ6GEYJ221V	CHIP RESISTOR	
R6016	ERJ6GEYJ222V	CHIP RESISTOR	
R6017	ERJ6GEYJ102V	CHIP RESISTOR	
R6019	ERJ6GEYJ103V	CHIP RESISTOR	
R6020	ERJ6GEYJ393V	CHIP RESISTOR	
R6021	ERJ6GEYJ273V	CHIP RESISTOR	
R6022	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R6023	ERJ6GEYJ273V	CHIP RESISTOR	
R6025	ERJ6GEYJ433V	CHIP RESISTOR	
R6026	ERJ6GEYJ393V	CHIP RESISTOR	
R6031	ERJ6GEYJ682V	CHIP RESISTOR	
R6035	ERJ6GEYJ681V	CHIP RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R6036	ERJ6GEYJ681V	CHIP RESISTOR	
R6039	ERJ6GEYJ102V	CHIP RESISTOR	
R6040	ERJ6GEYJ102V	CHIP RESISTOR	
R6041	ERJ6GEYJ102V	CHIP RESISTOR	
R6045	ERJ6GEYJ104V	CHIP RESISTOR	
R6046	ERJ6GEYJ472V	CHIP RESISTOR	
R6047	ERJ6GEYJ472V	CHIP RESISTOR	
R6048	ERJ6GEYJ472V	CHIP RESISTOR	
R6049	ERJ6GEYJ221V	CHIP RESISTOR	
R6051	ERJ6GEYJ564V	CHIP RESISTOR	
R6052	ERJ6GEYJ221V	CHIP RESISTOR	
R6053	ERJ6GEYJ682V	CHIP RESISTOR	
R6054	ERJ6GEYJ125V	CHIP RESISTOR	
R6055	ERJ6GEYJ682V	CHIP RESISTOR	
R6056	ERJ6GEYJ125V	CHIP RESISTOR	
R6057	ERJ6GEYJ104V	CHIP RESISTOR	
R6058	ERJ6GEYJ222V	CHIP RESISTOR	
R6059	ERJ6GEYJ222V	CHIP RESISTOR	
R6060	ERJ6GEYJ102V	CHIP RESISTOR	
R6061	ERJ6GEYJ102V	CHIP RESISTOR	
R6071	ERJ6GEYJ183V	CHIP RESISTOR	
R6072	ERJ6GEYJ223V	CHIP RESISTOR	
R6073	ERJ6GEYJ474V	CHIP RESISTOR	
R6074	ERDS2TJ471T	CARBON RESISTOR	
R6075	ERJ6GEYJ223V	CHIP RESISTOR	
R6076	ERJ6GEYJ153V	CHIP RESISTOR	
R6077	ERJ6GEYJ105V	CHIP RESISTOR	
R6078	ERJ6GEYJ471V	CHIP RESISTOR	
R6079	ERJ6GEYJ821V	CHIP RESISTOR	
R6083	ERJ6GEYJ222V	CHIP RESISTOR	
R7501	ERJ6GEYJ822V	CHIP RESISTOR	
R7502	ERJ6GEYJ562V	CHIP RESISTOR	
R7503	ERJ6GEYJ432V	CHIP RESISTOR	
R7504	ERJ6GEYJ822V	CHIP RESISTOR	
R7505	ERJ6GEYJ562V	CHIP RESISTOR	
R7506	ERJ6GEYJ432V	CHIP RESISTOR	
R7507	ERDS2TJ390T	CARBON RESISTOR	
R7509	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7510	ERDS2TJ821T	CARBON RESISTOR	
R7511	ERDS2TJ821T	CARBON RESISTOR	
R7512	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R7513	ERJ6GEYJ303V	CHIP RESISTOR	
R7514	ERJ6GEYJ303V	CHIP RESISTOR	
R7515	ERJ6GEYJ303V	CHIP RESISTOR	
R7516	ERJ6GEYJ303V	CHIP RESISTOR	
R7517	ERJ6GEYJ103V	CHIP RESISTOR	
R7518	ERJ6GEYJ103V	CHIP RESISTOR	
R7519	ERJ6GEYJ432V	CHIP RESISTOR	
R7520	ERJ6GEYJ123V	CHIP RESISTOR	
R7521	ERJ6GEYJ223V	CHIP RESISTOR	
R7522	ERJ6GEYJ822V	CHIP RESISTOR	
R7534	ERJ6GEYJ181V	CHIP RESISTOR	
R7535	ERJ6GEYJ103V	CHIP RESISTOR	
R7536	ERJ6GEYJ562V	CHIP RESISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
R7537	ERJ6GEYJ123V	CHIP RESISTOR	
R7538	ERJ6GEYJ123V	CHIP RESISTOR	
R7603	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R7605	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7606	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7607	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7608	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7611	ERDS2TJ331T	CARBON RESISTOR	
R7612	ERDS2TJ331T	CARBON RESISTOR	
R7613	ERJ6GEYJ151V	CHIP RESISTOR	
R7614	ERJ6GEYJ151V	CHIP RESISTOR	
R7615	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R7618	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7619	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7620	ERJ6GEYJ101Z	CHIP RESISTOR	ERJ6GEYJ101V
R7623	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R7626	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
R7628	ERJ6GEYJ103V	CHIP RESISTOR	
R7629	ERJ6GEYJ221V	CHIP RESISTOR	
R7631	ERJ6GEYJ221V	CHIP RESISTOR	
R7632	ERJ6GEYJ221V	CHIP RESISTOR	
R7637	ERJ6GEYJ221V	CHIP RESISTOR	
S1501	EVQWJCA01	MODE SELECT SWITCH	
S1502	K0L1BA000026	SWITCH	VST0325
S7501	EVQ11L07B	SWITCH	
S7502	EVQ11L07B	SWITCH	
S7504	EVQ11L07B	SWITCH	
S7505	EVQ11L07B	SWITCH	
S7507	K0C111A00006	SAFETY TAB SWITCH	
S7511	EVQ11L07B	SWITCH	
S7512	EVQ11404M	SWITCH	
S7513	EVQ11L07B	SWITCH	
S7514	EVQ11404M	SWITCH	
S7515	EVQ11L07B	SWITCH	
S7517	EVQ11L07B	SWITCH	
T0701	EQV5EC082P	TRANSFORMER	*1
T0701	EQV5EC083P	TRANSFORMER	*2
T0701	EQV5EC081P	TRANSFORMER	*3
T1150	ETS29AZ286AC	TRANSFORMER	⚠
T4001	EQQ7QF024P	HIGH FREQUENCY COIL	EQQ7QF024Q
TU7601	ENG47327G1	TUNER	⚠ *1
TU7601	ENG47328G1	TUNER	⚠ *2
TU7601	ENG47329G1	TUNER	⚠ *3
VR0701	EVNCYAA03B14	VARIABLE RESISTOR	
W501	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W502	ERJ8GEY0R00V	CHIP RESISTOR	
W503	ERJ8GEY0R00V	CHIP RESISTOR	
W504	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V

Ref. No.	Part No.	Part Name & Description	Remarks
W506	ERJ8GEY0R00V	CHIP RESISTOR	
W507	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W508	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W509	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W510	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W511	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W512	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W513	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W514	ERJ8GEY0R00V	CHIP RESISTOR	
W515	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W516	ERJ8GEY0R00V	CHIP RESISTOR	
W517	ERJ8GEY0R00V	CHIP RESISTOR	
W701	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W702	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W703	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W704	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W705	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W706	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W707	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W708	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W709	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W710	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W711	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W712	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W713	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W714	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W715	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W717	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W718	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W719	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W720	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W721	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W722	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W723	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W724	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W725	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W726	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W727	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W728	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W729	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W730	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W731	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W732	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W733	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W734	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W735	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
W736	ERJ6GEY0R00Z	CHIP RESISTOR	ERJ6GEY0R00V
X0701	J0B4045A0002	CRISTAL OSCILLATOR	*1
X0701	J0B4155A0003	CRISTAL OSCILLATOR	*2
X0701	J0B3955A0001	CRISTAL OSCILLATOR	*3
X0702	J0B4055A0001	CRISTAL OSCILLATOR	*3
X0704	VLF1493	FILTER	*1
X0704	VLF1495	FILTER	*2

Ref. No.	Part No.	Part Name & Description	Remarks
X0704	VLF1497	FILTER	*3
X3001	H0D443400039	CRISTAL OSZILLATOR	
X6001	H0A120500002	CRYSTAL OCSILLATOR	
X6002	VSX1022	QUARZ	
X7601	H0D245500011	QUARZ	VSX0953-T
		MISCELLANEOUS	
	EYF52BC	FUSE HOLDER	
	EYF52BC	FUSE HOLDER	
	VSC5227	SHIELD CASE	
	VSC4998	SHIELD CASE	
	VMP4471	ANGLE	
■	VEP03G25A	S-VHS PACK C.B.A.	(RTL) *1, *3
■	VEP03G25B	S-VHS PACK C.B.A.	(RTL) *2
C3301	F1H1C104A008	CHIP CAPACITOR	
C3302	F1H1C104A008	CHIP CAPACITOR	
C3303	F1H1C104A008	CHIP CAPACITOR	
C3305	F1H1C104A008	CHIP CAPACITOR	
C3306	F1H1C104A008	CHIP CAPACITOR	
C3307	F1H1C104A008	CHIP CAPACITOR	
C3308	F1H1H152A219	CHIP CAPACITOR	
C3309	F1H1C104A008	CHIP CAPACITOR	
C3310	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3311	F1H1C104A008	CHIP CAPACITOR	
C3312	F1H1H103A748	CHIP CAPACITOR	
C3313	F1H1H103A748	CHIP CAPACITOR	
C3314	F1H1H103A748	CHIP CAPACITOR	
C3315	F1H1H103A748	CHIP CAPACITOR	
C3316	F1H1H103A748	CHIP CAPACITOR	
C3317	F1H1H103A748	CHIP CAPACITOR	
C3318	F1H1H103A748	CHIP CAPACITOR	
C3319	F1H1C104A008	CHIP CAPACITOR	
C3320	F1H1C104A008	CHIP CAPACITOR	
C3321	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3322	F1H1C104A008	CHIP CAPACITOR	
C3323	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3324	ECJ1VB0J474K	CHIP CAPACITOR	
C3325	ECJ1VB0J474K	CHIP CAPACITOR	
C3326	F1H1H103A748	CHIP CAPACITOR	
C3327	F1H1H103A748	CHIP CAPACITOR	
C3328	F1H1C104A008	CHIP CAPACITOR	
C3329	F1H1C104A008	CHIP CAPACITOR	
C3330	ECJ1VB1H822K	CHIP CAPACITOR	ECUV1H822KBV
C3331	F1H1C104A008	CHIP CAPACITOR	
C3332	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3333	F1H1C104A071	CHIP CAPACITOR	
C3334	F1H1H103A220	CHIP CAPACITOR	
C3335	F1H1H103A220	CHIP CAPACITOR	
C3336	F1H1H103A220	CHIP CAPACITOR	

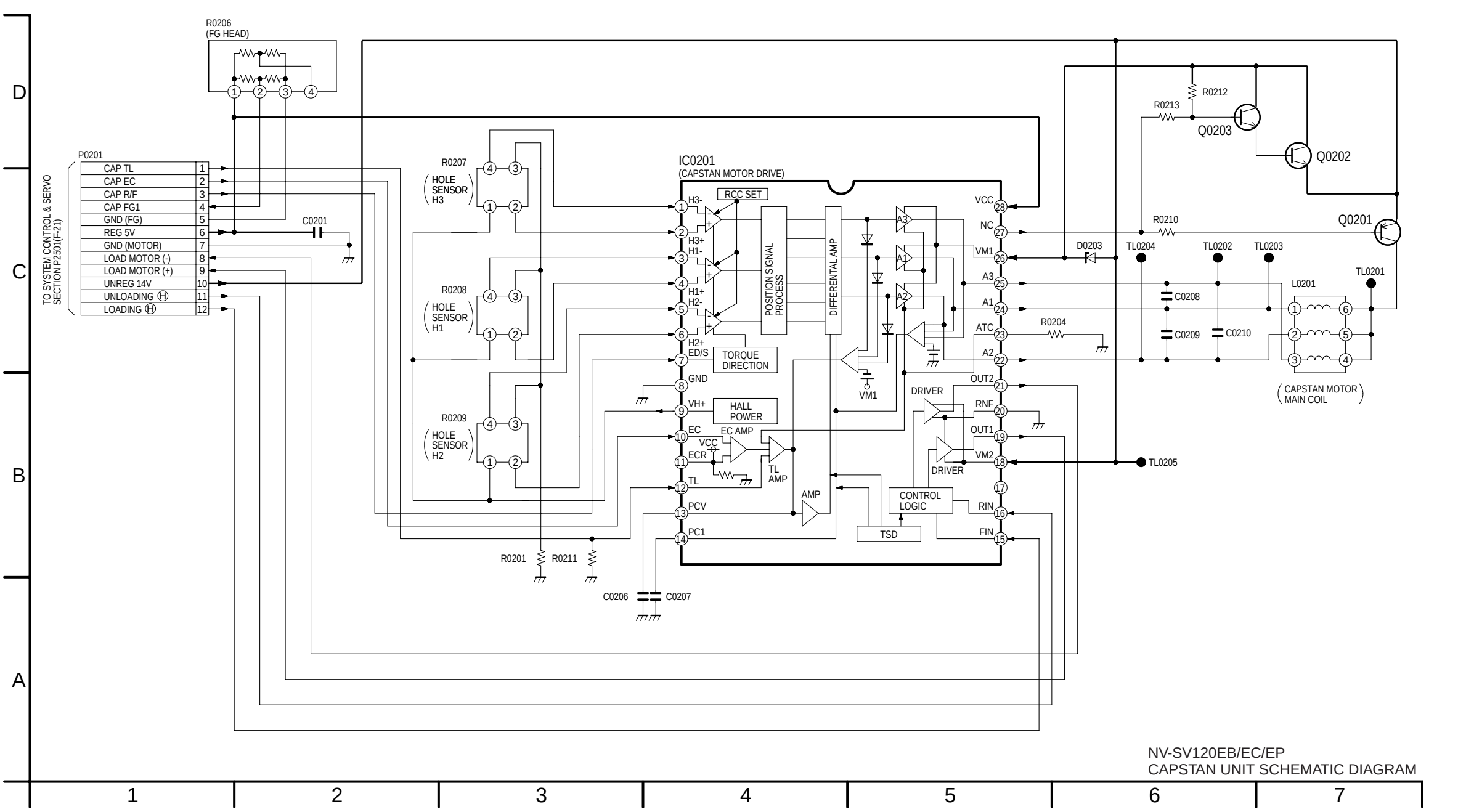
Ref. No.	Part No.	Part Name & Description	Remarks
C3338	F1H1H103A220	CHIP CAPACITOR	
C3339	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3340	F1H1C104A008	CHIP CAPACITOR	
C3341	F1H1H103A220	CHIP CAPACITOR	
C3342	ECEA1CKA100B	ALU ELEC CAPACITOR	
C3343	F1H1H103A220	CHIP CAPACITOR	
C3344	ECJ1VB0J474K	CHIP CAPACITOR	
C3345	ECEA1HKA4R7B	ALU ELEC CAPACITOR	
C3347	ECJ2YB0J225K	CHIP CAPACITOR	
C3350	ECEA1CKA100B	ALU ELEC CAPACITOR	
C3351	F1H1H103A220	CHIP CAPACITOR	
C3353	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3355	ECJ2YB0J225K	CHIP CAPACITOR	
C3360	ECEA0JKA470B	ALU ELEC CAPACITOR	
C3362	F1H1C104A008	CHIP CAPACITOR	
C3366	ECJ2YB0J225K	CHIP CAPACITOR	
C3371	F1H1C104A008	CHIP CAPACITOR	
C3372	ECJ2YB0J225K	CHIP CAPACITOR	
C3374	F1H1H271A832	CHIP CAPACITOR	
C3376	F1H1H271A832	CHIP CAPACITOR	
C3379	ECJ1VC1H390J	CHIP CAPACITOR	
C3380	ECJ1VC1H050C	CHIP CAPACITOR	
C3383	ECJ1VB0J474K	CHIP CAPACITOR	*1,*3
C3383	F1H1H103A220	CHIP CAPACITOR	*2
C3384	ECJ1VC1H151J	CHIP CAPACITOR	ECUV1H151JCV
C3385	ECJ1VC1H220J	CHIP CAPACITOR	*1,*3 ECUV1H220JCV
C3386	ECJ1VC1H220J	CHIP CAPACITOR	*1,*3 ECUV1H220JCV
C3387	F1H1H120A230	CHIP CAPACITOR	*1,*3
C3388	F1H0J105A002	CHIP CAPACITOR	*1,*3
C3389	F1H0J105A002	CHIP CAPACITOR	*1,*3
C3390	F1H1H121A832	CHIP CAPACITOR	
C3391	F1H1H221A832	CHIP CAPACITOR	
C3393	F1H1H271A832	CHIP CAPACITOR	
IC3301	C1AB00001631	INTEGRATED CIRCUIT	
IC3302	C0EBE0000205	INTEGRATED CIRCUIT	
IC3303	C0DBCFD00001	INTEGRATED CIRCUIT	
IC3304	C1AB00001486	INTEGRATED CIRCUIT	*1,*3
IC3305	C1AB00001760	INTEGRATED CIRCUIT	
K3314	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K3315	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K3320	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K3321	ERJ3GEY0R00V	CHIP RESISTOR	*2 ERJ3GS0R00V
K3322	ERJ3GEY0R00V	CHIP RESISTOR	*2 ERJ3GS0R00V
K3327	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
K3329	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
L3301	G0C220JA0019	CHOKE COIL AXIAL	VLQ0599J220T
L3302	G0C220JA0019	CHOKE COIL AXIAL	VLQ0599J220T
L3309	G1C101J00006	FIXED INDUCTOR	*1,*3
L3312	G1C330J00004	FIXED INDUCTOR	VLQ0163J330
LB3301	J0JCC0000077	BEAD CORE	

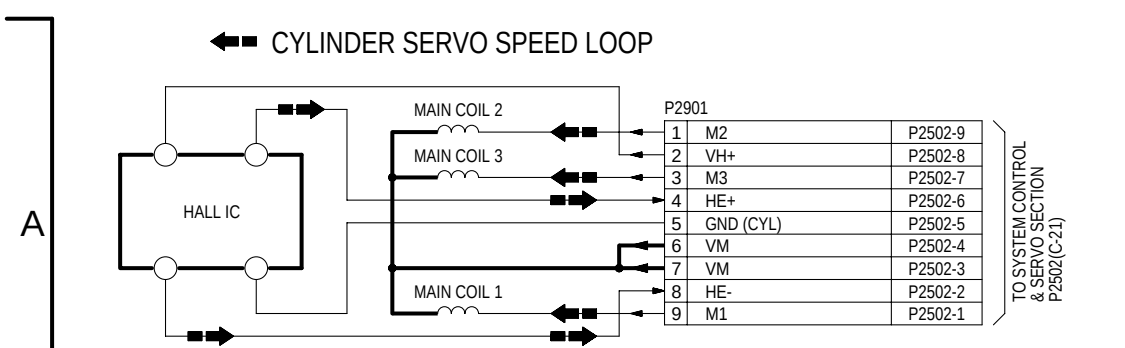
Ref. No.	Part No.	Part Name & Description	Remarks
LB3303	J0JCC0000077	BEAD CORE	
LB3304	J0JCC0000077	BEAD CORE	
LB3305	J0JCC0000077	BEAD CORE	
LB3306	J0JCC0000077	BEAD CORE	
LB3307	J0JCC0000077	BEAD CORE	
LB3308	J0JCC0000077	BEAD CORE	
LB3309	J0JCC0000077	BEAD CORE	
LB3310	J0JCC0000077	BEAD CORE	
LB3311	J0JCC0000077	BEAD CORE	
PS3301	K1KB13B00014	CONNECTOR	
PS3302	K1KB18B00016	CONNECTOR	
Q3307	2SD1819ARL	TRANSISTOR	
Q3311	2SD1819ARL	TRANSISTOR	
Q3312	2SB1218A0L	SS-TRANSISTOR	2SB1218A-TX
Q3315	2SB1218A0L	SS-TRANSISTOR	2SB1218A-TX
Q3316	2SD1819ARL	TRANSISTOR	
Q3317	2SB1218A0L	SS-TRANSISTOR	*1,*3 2SB1218A-TX
Q3318	2SB1218A0L	SS-TRANSISTOR	*1,*3 2SB1218A-TX
Q3319	2SD1819ARL	TRANSISTOR	*1,*3
Q3320	2SB1218A0L	SS-TRANSISTOR	*1,*3 2SB1218A-TX
Q3321	2SB1218A0L	SS-TRANSISTOR	*1,*3 2SB1218A-TX
Q3322	2SB1218A0L	SS-TRANSISTOR	*1,*3 2SB1218A-TX
R3301	ERJ3GEYJ223V	CHIP RESISTOR	ERJ3GSJ223V
R3302	ERJ3GEYJ333V	CHIP RESISTOR	
R3305	ERJ3GEYJ223V	CHIP RESISTOR	ERJ3GSJ223V
R3306	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
R3307	ERJ3GEYJ103V	CHIP RESISTOR	ERJ3GSJ103V
R3308	ERJ3GEYJ103V	CHIP RESISTOR	ERJ3GSJ103V
R3309	ERJ3GEYJ561V	CHIP RESISTOR	ERJ3GSJ561V
R3310	ERJ3GEYG121V	CHIP RESISTOR	
R3313	ERJ3GEYJ101V	CHIP RESISTOR	ERJ3GSJ101V
R3314	ERJ3GEYJ101V	CHIP RESISTOR	ERJ3GSJ101V
R3315	ERJ3GEYJ390V	CHIP RESISTOR	
R3316	ERJ3GEYJ102V	CHIP RESISTOR	ERJ3GSJ102V
R3318	ERJ3GEYG102V	CHIP RESISTOR	
R3323	ERJ3GEYG152V	CHIP RESISTOR	
R3324	ERJ3GEY0R00V	CHIP RESISTOR	ERJ3GS0R00V
R3327	ERJ3GEYJ471V	CHIP RESISTOR	ERJ3GSJ471V
R3328	ERJ3GEYJ112V	CHIP RESISTOR	
R3329	ERJ3GEYJ221V	CHIP RESISTOR	ERJ3GSJ221V
R3330	ERJ3GEYJ122V	CHIP RESISTOR	ERJ3GSJ122V
R3331	ERJ3GEYG242V	CHIP RESISTOR	
R3332	ERJ3GEYG102V	CHIP RESISTOR	
R3334	ERJ3GEYG561V	CHIP RESISTOR	
R3335	ERJ3GEYG102V	CHIP RESISTOR	
R3339	ERJ3GEYG392V	CHIP RESISTOR	
R3340	ERJ3GEYG102V	CHIP RESISTOR	
R3349	ERJ3GEYG392V	CHIP RESISTOR	
R3364	ERJ3GEYJ561V	CHIP RESISTOR	*1,*3 ERJ3GSJ561V
R3365	ERJ3GEYG102V	CHIP RESISTOR	*1,*3
R3366	ERJ3GEYJ152V	CHIP RESISTOR	*1,*3 ERJ3GSJ152V

Ref. No.	Part No.	Part Name & Description	Remarks
R3367	ERJ3GEYG112V	CHIP RESISTOR	*1,*3
R3368	ERJ3GEYG111V	CHIP RESISTOR	*1,*3
R3369	ERJ3GEYJ331V	CHIP RESISTOR	*1,*3
R3370	ERJ3GEYG121V	CHIP RESISTOR	*1,*3
R3371	ERJ3GEYJ561V	CHIP RESISTOR	*1,*3 ERJ3GSJ561V
R3372	ERJ3GEYJ105V	CHIP RESISTOR	*1,*3 ERJ3GSJ105V
R3373	ERJ3GEYJ105V	CHIP RESISTOR	*1,*3 ERJ3GSJ105V
R3374	ERJ3GEYG102V	CHIP RESISTOR	*1,*3
R3375	ERJ3GEYG112V	CHIP RESISTOR	*1,*3
R3376	ERJ3GEYJ152V	CHIP RESISTOR	*1,*3 ERJ3GSJ152V
■	VEP04832A	FRONT C.B.A.	(RTL)
C4803	ECKR1H102KB5	CERAMIC CAPACITOR	
C4804	ECKR1H102KB5	CERAMIC CAPACITOR	
C4805	ECQV1H104JL3	PLAST FILM CAPACITOR	
C4806	ECQV1H104JL3	PLAST FILM CAPACITOR	
IC4801	PNA4618M10VT	INTEGRATED CIRCUIT	
JK4801	K2HA307A0003	CONNECTOR	
JK4802	K1CB104A0009	AV	VJJ0574
L4801	----------	JUMPER WIRE	
L4802	----------	JUMPER WIRE	
PS4801	K1KB15B00013	CONNECTOR	VJS3042F015W
R4801	ERDS2TJ750T	CARBON RESISTOR	
R4802	ERDS2TJ471T	CARBON RESISTOR	
R4803	ERDS2TJ471T	CARBON RESISTOR	
R4804	ERDS2TJ750T	CARBON RESISTOR	
R4805	ERDS2TJ750T	CARBON RESISTOR	
R4806	ERDS2TJ562T	CARBON RESISTOR	
R4807	ERDS2TJ562T	CARBON RESISTOR	
R4808	ERDS2TJ432T	CARBON RESISTOR	
R4809	ERDS2TJ822T	CARBON RESISTOR	
S4801	EVQ11G09K	SWITCH	
S4802	EVQ11G09K	SWITCH	
S4803	EVQ11G09K	SWITCH	
S4804	EVQ11G09K	SWITCH	
S4805	EVQ11G09K	SWITCH	
S4806	EVQ11G09K	SWITCH	
	VGQ6104	FRONT PCB HOLDER	
■	----------	CYLINDER STATOR C.B.A.	

Ref. No.	Part No.	Part Name & Description	Remarks
		MISCELLANEOUS	
	VJS3537F009G	CONNECTOR (FEMALE) 9P	K1MN09B00039
	HW-300A-DF	HALL IC	B4AAB0000007

12. SCHEMATIC DIAGRAM FOR PRINTING WITH A4 SIZE


R0206
(FG HEAD)
P0201
CAP TL 1
CAP EC 2
CAP R/F 3
CAP FG1 4
GND (FG) 5
REG 5V 6
GND (MOTOR) 7
LOAD MOTOR (-) 8
LOAD MOTOR (+) 9
UNREG 14V 10
UNLOADING Ⓗ 11
LOADING Ⓗ 12
TO SYSTEM CONTROL & SERVO SECTION P2501(F-21)
C0201
R0207
HOLE SENSOR H3
R0208
HOLE SENSOR H1
R0209
HOLE SENSOR H2
IC0201
(CAPSTAN MOTOR DRIVE)
RCC SET
H3-
H3+
H1-
H1+
H2-
H2+
ED/S
TORQUE DIRECTION
GND
VH+
HALL POWER
EC
EC AMP
VCC
ECR
TL
TL AMP
PCV
AMP
PC1
POSITION SIGNAL PROCESS
DIFFERENTAL AMP
A3
A1
A2
VM1
VCC
NC
VM1
A3
A1
ATC
A2
OUT2
DRIVER
RNF
OUT1
VM2
DRIVER
CONTROL LOGIC
TSD
RIN
FIN
R0201
R0211
C0206
C0207
R0212
R0213
Q0203
Q0202
Q0201
R0210
D0203
TL0204
TL0202
TL0203
TL0201
L0201
C0208
C0209
C0210
R0204
CAPSTAN MOTOR MAIN COIL
TL0205
NV-SV120EB/EC/EP
CAPSTAN UNIT SCHEMATIC DIAGRAM



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
CYLINDER STATOR
SCHEMATIC DIAGRAM

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION

AUDIO SIGNAL PATH

IC7601
C0EAH0000051
(RESET)
IN GND OUT
4.9 4.9

X7601
H0D245500011

C7628 0.1
C7630 8200
C7631 0
R7626 0

TEST1 VDDA2 VSSA2 VDDR2 1 REF TEST2 TP3 XTAL I XTAL O ADDR1 PCLK
3.3 2.0 1.6 1.6 0.4

R7623 0
C7624 0.1

L7607 2.2u
R7615 0
C7625 0.01
C7621 50V2.2
R7618 100

L7608 1u
C7647 6V100
C7648 0.01
C7622 0.1

R7619 100
R7620 100
C7653 10P
C7654 10P

L7609 0
C7651 16V10
R7637 220
R7629 220
C7634 100P

C7645 16V10
R7631 220

C7646 16V10
R7632 220

Ⓡ SIF
Ⓡ REG 5V
Ⓡ GND
Ⓢ SYS IIC CLOCK
Ⓢ SYS IIC DATA
Ⓥ TUNER AUDIO (N)
Ⓐ TUNER AUDIO (L)
Ⓐ TUNER AUDIO (R)

23 SIF2 2.0
24 VREF1 2.0
25 SIF1 2.0
26 CRESET 4.9
27 VSSA3
28 VDDA3 4.9
29 SCL 4.8
30 SDA 4.6
31 SDO 1.2
32 WS 1.2
33 SCK 1.2

INPUT SWITCH AGC, ADC
FM/AM DEMODULATION
IDENTIFI-CATION
IIC BUS INTERFACE
IIC BUS INTERFACE
DEMATRIX
2 CHANNEL ANALOG/ SATELLITE DECODER
DIGITAL SELECTOR
LEVEL ADJUST
NICAM DEMODULATION
NICAM DECODER
POST FILTER 3 DACS
ANALOG CROSSBAR SWITCH
2 CHANNEL OUTPUT BUFFERS
MONO CHANNEL OUTPUT BUFFERS

SYS CLK 34 1.2
VDDD3 35 4.8
VSSD3 36
P1 37 4.9
MONO IN 38 2.4
EXTIR 39 2.4
EXTIL 40 2.4
VREF2 41 2.4
P2 42 4.9
OUT M 43 2.5
VSSA4 44

R7628 10K
LB7603 J0JCC0000124
C7638 0.1
TL7603
TL7601
C7635 6V47
TL7602

TP1 11
NICAM 10 0.4
TP2 9
VDEC2 8 0
VSSD2 7
VDDD1 6 4.8
VSSD1 5
VSSA1 4
VDDA1 3 4.9
OUT R 2 2.5
OUT L 1 2.5

LB7601 J0JCC0000080
LB7604 J0JCC0000124
C7641 0.1
C7642 0.1

IC7602
TDA9874AH

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
DECODER SECTION SCHEMATIC DIAGRAM

F E D C B A
1 2 3 4 5 6 7 8

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓓ :TO DECODER SECTION

AUDIO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Ⓢ MUTE Ⓗ
Ⓢ SYS IIC CLOCK
Ⓢ SYS IIC DATA
Ⓥ FSC
Ⓘ AV2 A OUT (R)
Ⓘ AV2 A OUT (L)
Ⓘ AV1 A OUT (R)
Ⓘ AV1 A OUT (L)
Ⓡ PS 5V
Ⓡ PS 12V
Ⓡ GND
Ⓥ AUDIO IN (N)
Ⓥ AUDIO OUT (N)
Ⓡ RFC AUDIO OUT
Ⓢ RFC MUTE Ⓗ
Ⓘ AV3 A IN (R)
Ⓘ AV3 A IN (L)
Ⓓ TUNER AUDIO (R)
Ⓘ AV1 A IN (R)
Ⓘ AV2 A IN (R)
Ⓓ TUNER AUDIO (L)
Ⓘ AV1 A IN (L)
Ⓘ AV2 A IN (L)
Ⓥ AUDIO HEAD COM
Ⓥ AUDIO HEAD R
Ⓥ AUDIO HEAD L
Ⓢ A.HEAD SW
Ⓢ ABS NORMAL Ⓛ
Ⓢ D.FM REC Ⓗ

QR4501 UN2113 (BUFFER)
QR4503 XN0121600L (MUTE)
QR4504 XN0121600L (MUTE)
QR4502 UN2113 (BUFFER)
QR4507 UN2216 (MUTE)

IC4501 AN3656NFBPBV

IIC BUS INTERFACE
SWITCH RCH
SWITCH LCH
OUTPUT SELECT SWITCH RCH
OUTPUT SELECT SWITCH LCH
NORMAL OUTPUT SWITCH
DET
INPUT SWITCH RCH
INPUT SWITCH LCH
AGC & SWITCH
FM MODULATOR/ DEMODULATOR
BPF
LPF
AGC
PNR RCH
PNR LCH
PREAMP & SWITCH
REC AGC DET
ENV.DET OUT
REC DC2
VCO-FO
VCC
GND(R)
REC AGC ADJ.
MUTE CONTROL
VREF
GND (L)
VCC2

L4502 1.2u
L4503 10u
L4501 1.2u

TW4502
TL4503
TW4511
TW4501

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

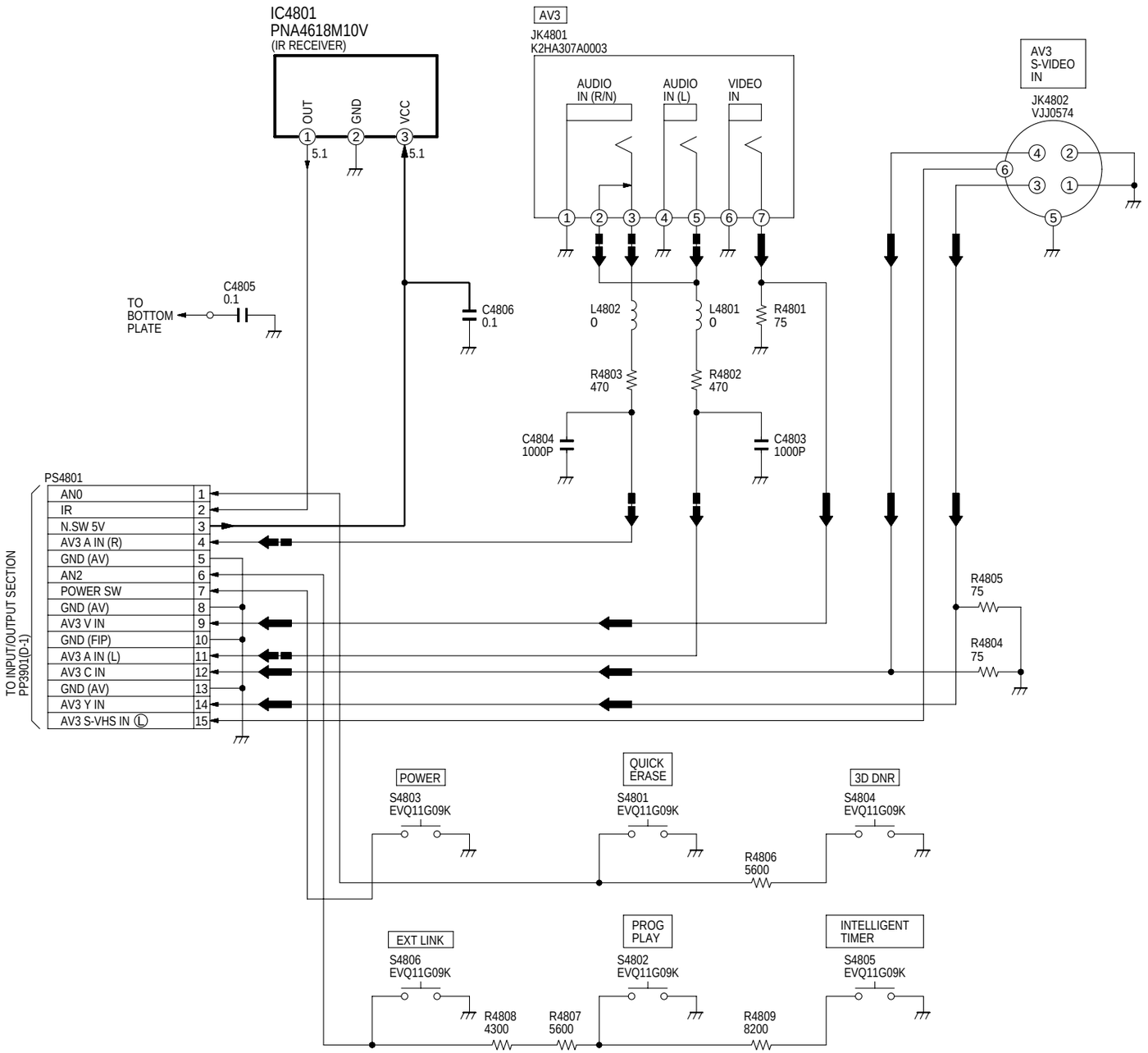
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
Hi-Fi AUDIO SECTION SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN REC MODE



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-SV120EB/EC/EP
FRONT SCHEMATIC DIAGRAM

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓣ :TO TIMER SECTION

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Q4906 2SD1328 (RGB ON:ON)
Q4905 2SD601A (AV2 PB:ON)
QR4902 UN2212 (RGB OFF Ⓗ :ON)
QR4901 UN2215 (SWITCHING)
Q4902 2SB709A (INV.)
Q4901 2SD601A (AMP)
IC4901 C1AB00000601
IC4902 LA73023V
L4902 33u
L4903 33u
PS 12V
PS 5V
TUNER VIDEO
RFC VIDEO OUT
AV1 A OUT (R)
AV1 A OUT (L)
AV1 A IN (R)
AV1 A IN (L)
AV1 PB Ⓗ
AV2 A OUT (R)
AV2 A OUT (L)
AV2 A IN (R)
AV2 A IN (L)
AV2 PB Ⓗ
OSD PLUSE
N.SW 5V
POWER SW
AN2
IR
AN0
AV3 S-VHS IN Ⓛ
AV3 A IN (L)
AV3 A IN (R)
VIDEO OUT
C OUT
Y OUT
C IN
VIDEO/Y IN
VHS Ⓗ
S-VHS Ⓗ
PROG Ⓗ
IO IIC DATA
IO IIC CLOCK
GND
GND (AV)
GND (FIP)
TO FRONT PS4801(C1)
PP3901
S-VIDEO OUT
AUDIO OUT (R)
AUDIO OUT (L)
VIDEO OUT
AV1
AV2
(TV)
(DECODER/EXT)
NV-SV120EB/EC/EP
INPUT/OUTPUT SECTION
SCHEMATIC DIAGRAM

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NOTE:DO NOT ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

HOT

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓣ :TO TIMER SECTION

P1101 VJS4121 — AC INLET
F1101 VSF0243C16
D1110 ERZVA5V471
L1121 ELF15N005A
C1121 1000P
C1120 0.068
L1120 ELF15N003A
D1140 DF08S-6622
R1150 1M
R1154 1M
C1141 400V33

T1150 ETS29AZ286AC
P2
P1
B2
B1

S7 — HEATER DC(-) (R)(T)
C1280 10V100
S6 — D1280 11EQS04 — HEATER DC(+) (R)
S5 — D1270 MA185 — C1270 50V22 — UNREG -29V (R)
S4B
S4A
S2 — D1250 ERA85-009V5, D1251 ERA85-009V5 — L1250 22u — C1250 25V680, C1251 25V100 — R1200 39K, R1207 33K — UNREG 14V (R)(S)
S3 — D1262 31DQ04FC6 — L1260 22u — C1260 10V1200, C1261 10V330 — UNREG 6V (R)
S1 — D1230 MA185 — C1230 50V22, D1180 MA7510 — UNREG 36V (R)

GND (R) — TO BOTTOM PLATE

LB1213 J0JHC0000070
C1123 1000P
LR1150 VLP0392

Q1153 2SK2876 (VOLTAGE CONTROL)
R1162 1K
R1163 100
C1155 270P
C1210 3300P

Q1150 FS4KM-12A-AS (VOLTAGE CONTROL)
D1150 AU012V2
R1155 100K
C1154 0.022
R1153 330

Q1151 2SD1992A (VOLTAGE CONTROL)
R1157 1800
D1157 MA4027L
D1152 MA185
C1151 0.047
D1155 MA165
C1153 0.1
R1156 33
R1159 3.3
R1158 330
C1152 0.01

Q1152 2SC3311A (VOLTAGE CONTROL)
R1161 100
R1160 0.51 (1W)

Q1200 PC123ZY2
R1206 270
R1205 2200

IC1200 uPC1093J
C1200 0.1
R1204 12K
R1203 33K
R1208 8200
R1209 56K
R1202 2200

NOTE1:WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT,SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE.....
SECONDARY SIDE...
NOTE2:THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:THE MEASURMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-SV120EB/EC/EP POWER TRANSFORMER SECTION SCHEMATIC DIAGRAM

Ⓟ :TO POWER TRANSFORMER SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDEIO SECTION
Ⓐ :TO HI-Fi AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓣ :TO TIMER SECTION
Ⓓ :TO DECODER SECTION

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

Q1013 2SD601A (FIP ON/OFF CONTROL)
Q1003 2SB710A (POWER SAVE CONTROL)
QR1003 UN2112 (FIP Ⓛ:ON)
QR1004 UN2111 (POWER ON/OFF CONTROL)
QR1005 UN2211 (POWER ON:ON)
Q1001 2SD602A (BUFFER)
Q1005 2SC1959Y (12V REG.)
Q1010 2SC1959Y (5V REG.)
Q1009 2SC1959Y (5V REG.)
Q1008 2SC1959Y (5V REG.)
Q1007 2SC1959Y (5V REG.)
Q1006 2SC1959Y (5V REG.)
Q1002 2SC1959Y (5V REG.)
Q1012 2SC1959Y (3.3V REG.)

TUNER UNIT
⚠ TU7601
ENG47328G1:EB
ENG47327G1:EC
ENG47329G1:EP

1 N.SW 5V
2 AUDIO OUT
3 DATA
4 PS 5V
5 CLOCK
6 VIDEO OUT
7
8 AGC
9 BT
10
11 CLOCK
12 DATA
13
14 REG 5V
15 SW1
16 BTL 30V
17 IF OUT
18 IF IN

DU7601
19 SW1 PK0701-1
20 SW2 PK0701-2
21 PK0701-3
22 SIF PK0701-4
23 AFC S-CURVE PK0701-5
24 TUNER VIDEO PK0701-6
25 REG 5V PK0701-7
26 PK0701-8
27 GND PK0701-9
TO TV DEMODULATOR PACK PK0701(D-1)

P UNREG -29V
S FIP Ⓛ
T FIP -29V
S SLEEP Ⓗ
P UNREG 36V
P UNREG 14V
P UNREG 6V
P HEATER DC (+)
P HEATER DC (-)
P GND
S V A GND
I T D GND
S V A T GND (SYS)
S I T GND (FIP)
S GND (CTL)
S GND (FG)
S GND (MOTOR)
V A GND (A)
V A GND (HA)
V GND (V)
V GND (NA)
I GND (AV)
T HEATER (+)
S POWER OFF Ⓛ
S D REG 5V
V VIDEO 5V
V DNR 5V
S A I PS 12V
V PS 3.3V
S V A I PS 5V
V BIAS 5V
S I T N.SW 5V
A RFC AUDIO OUT A1
I RFC VIDEO OUT A2
S SYS IIC CLOCK A3
S SYS IIC DATA A4
S SW2 A5
D SIF A6
S AFC S-CURVE A7
I TUNER VIDEO A8

A1 R7603 0
A2 R7606 100
A3 R7605 100
A4 R7608 100
A5 R7607 100
A6
A7
A8 R7614 150, R7613 150
(EP) C7619 0.1, K7611 J0JBC0000041
(EC/EP) C7617 0.01

L7601 27u, C7603 6V100, C7605 0.01
L7602 27u, C7604 6V100
L7603 27u
L7605 2.2u, C7614 6V100, C7615 0.01, R7612 330, R7611 330, C7607 50V1, D7601 MA4300M
L7606 0

C1026 0.1, R1003 27K, R1026 6800, R1027 3300, R1028 3300, C1025 0.1
R1001 33K, R1014 4700, R1016 10K
R1024 5600
R1006 5600, R1005 5600
C1008 0.1, C1004 25V47, D1003 MA4130NL, R1013 10K, R1015 10K
C1020 0.1
C1019 0.1
C1018 0.1, C1016 16V100, D1011 MA4051NM, D1012 MA165
R1022 150, R1025 150
C1027 0.1, R1004 1K, C1028 25V47, D1008 11ES1, D1004 11ES1, D1009 MA4033H, D1010 MA165
C1002 25V47, D1002 MA4056NH, R1008 470, C1003 0.1
C1011 25V47, D1005 MA4056NH, R1009 470, C1009 0.1

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
POWER SUPPLY/RF
SECTION SCHEMATIC DIAGRAM

G F E D C B A
1 2 3 4 5 6 7 8 9 10

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

PS3301 — TO LUMINANCE & CHROMINANCE/ AUDIO SECTION PP3001(E-21)

FSC	1	
V MASK	2	
SYS IIC DATA	3	
SYS IIC CLOCK	4	
PS 3.3V	5	
C IN	6	A1
DNR 5V	7	
PB C	8	A2
GND	9	
EMPHA OUT	10	
GND	11	
EMPHA IN	12	B1
GND	13	

PS3302 — TO LUMINANCE & CHROMINANCE/ AUDIO SECTION PP3002(C-21)

HEAD SW	1	A3
	2	
	3	A4
VIDEO OUT	4	
GND	5	
OSD VIDEO	6	
GND	7	
C OUT	8	A5
GND	9	
Y OUT	10	A6
SECAM C	11	A7
SEPA C	12	B2
	13	B3
REC Y	14	B4
SECAM YC	15	B5
SEPA Y	16	B6
CURR OUT	17	B7
PB Y	18	B8

IC3305 C1AB00001760

IC3304 C1AB00001486

Q3322 2SB1218A (BUFFER)

Q3321 2SB1218A (BUFFER)

Q3320 2SB1218A (INV.)

Q3319 2SD1819A (BUFFER)

Q3318 2SB1218A (BUFFER)

Q3317 2SB1218A (AMP)

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NV-SV120EB/EC/EP
S-VHS PACK SCHEMATIC DIAGRAM

(A8) (A9) (A4) (A3)

LB3305 J0JCC0000077
LB3304 J0JCC0000077
LB3303 J0JCC0000077
LB3309 J0JCC0000077
LB3310 J0JCC0000077
LB3307 J0JCC0000077
LB3306 J0JCC0000077
LB3308 J0JCC0000077

C3310 6V47
C3323 6V47
C3321 6V47
C3332 6V47
C3327 0.01
C3326 0.01

IC3303
PQ1K253M2ZP
(2.5V REG)
1 VIN 3.3
2 GND
3 VC 3.3
6 VOUT 2.5
5 GND
4 NR 1.2
C3350 16V10
C3351 0.01
C3353 6V47

IC3302
R3112N251A
(RESET)
1 OUT 3.3
2 VDD 3.3
3 GND
5 CD 1.6
R3307 10K
C3330 8200P
R3301 22K
R3302 33K

R3330 1200
R3332 1K
R3331 2400
Q3312 2SB1218A (AMP) 2.2 1.5
R3306 0
C3331 0.1
C3328 0.1
C3329 0.1
C3303 0.1
R3305 22K

C3325 6V0.47
C3324 6V0.47
C3322 0.1
C3318 0.01
C3317 0.01
C3316 0.01
C3320 0.1
C3315 0.01
C3319 0.1
C3314 0.01
C3313 0.01
C3312 0.01

Q3311 2SD1819A (AMP) 5.1 2.6 (0.4)
R3327 470 2.0 (0)
R3328 1100
(A12)

Q3307 2SD1819A (AMP) 5.1 1.7 1.1
(A11)

Q3316 2SD1819A (AMP) 5.1 2.4 1.8
C3384 150P
R3340 1K
R3310 120
(A10)
R3309 560
Q3315 2SB1218A (AMP) 2.1 1.5

1 VSS PLL
2 FSC IN 1.2
3 VDD VCO 2.5
4 FIL 1 1.4
5 FIL 2 0
6 VSS VCO
7 MODE 1 0.4
8 CSYNC IN
9 DOC IN
10 KILLER
11 TIN 16
12 D VDD1 2.5
13 TIN 15
14 DTMB
15 D VSS1
16 DT CLK
17 TOUT 1 0
18 TOUT 2 0
19 VDD RAM1 2.5
20 TOUT 3 0
21 TOUT 4 3.3
22 VSS RAM1
23 MASKP 1 0
24 VDD IO1 3.3
25 MASKP 2 0
26 PAL ID 0
27 VSS IO1
28 F50 3.3
29 NONST 3.3
30 SYNC DET 0

IC3301
TC90A88F
(3D Y/C SEP & 3D NR TBC)

C3307 0.1
C3306 0.1
C3305 0.1
C3311 0.1
C3309 0.1
L3312 33u
C3379 39P
C3308 1500P

81 YC IN 1.1
82 VSS YAD
83 Y IN 1.1
84 VDD YAD 2.5
85 VRB YAD 0.8
86 VRB CAD 0.8
87 VDD CAD 2.5
88 C IN 1.2
89 VSS CAD
90 VRT CAD 1.7
91 A VSS1
92 VDD YCDA 2.5
93 C OUT 1.7
94 VSS YCDA
95 Y OUT 1.5
96 BIAS DA2 1.2
97 BIAS DA1 0.9
98 VREF DA 0.9
99 A VSS2
100 VDD PLL 2.5

REC
PB
A/D 4FSC
FB CLAMP
PED CLAMP
BIAS
A/D 4FSC
DECODER
D/A 8FSC
UP SAMPLING
ENCODER (BURST CHANGE)
EQ
CNR
D/A 8FSC
UP SAMPLING
DELAY ADJ.
EQ YNC
BLACK EXPANSION (SYNC CHANGE)
YNR LNR
MEMORY
3D Y/C SEP.
DELAY ADJ.
TBC
3D DNR
SYNC TIMING CONTROL

50 VDD RAM2 2.5
49 TBC WE 0
48 HSW IN 2.4
47 PV IN
46 ADV OUT 0.1
45 D VSS2
44 OSD CK 0
43 D VDD2 2.5
42 TEST 3
41 TEST 2
40 TEST 1
39 VSS IO2
38 HD OUT 0
37 VD OUT 0
36 VDD IO2 3.3
35 OSD A2
34 OSD A1
33 OSD B
32 OSD G
31 OSD R

C3302 0.1
C3301 0.1
LB3311 J0JCC0000077
LB3301 J0JCC0000077

(B9) (B10) (B3)

NV-SV120EB/EC/EP
S-VHS PACK SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
S-VHS PACK SCHEMATIC DIAGRAM

(P) :TO POWER TRANSFORMER SECTION
(R) :TO POWER SUPPLY/RF SECTION
(V) :TO LUMINANCE & CHROMINANCE/AUDIO SECTION
(A) :TO Hi-Fi AUDIO SECTION
(I) :TO INPUT/OUTPUT SECTION
(T) :TO TIMER SECTION
(D) :TO DECODER SECTION

CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP

QR6004 UN2211 (SLEEP (L):OFF)
R1017 10K
R2501 0
R2502 2200
C2506 0.056
C6038 22P
C6039 22P
R6047 4700
R6048 4700
C2509 0.47
R2505 3900
R2504 10K
R2503 10K
C2507 0.056
R6011 220
R6012 220
R6013 220
R6016 2200
C6042 0.01
LB6001 J0JBC0000041
R6007 47K
R6040 1K
R6041 1K
L6005 0
C6024 6V220
C6040 0.1
R6079 820
Q6010 2SB709A (AMP)
R6078 470
C6035 1
C6036 560P
R6077 1M
Q6009 2SD601A (AMP)
C6022 220P
C6023 1
R6039 1K
R6003 390
C6004 0.01
R6002 1K
C6003 470P
C6005 0.01
R6009 22K
R6004 0
C6009 18P
X6001 H0A120500002
C6010 18P
R6005 220K
C6011 18P
X6002 VSX1022
C6012 15P

IC1502 RPI354N (S-REEL)
IC1501 RPI354N (T-REEL)
TL6013
TL6012
TW6002
TW2015
C2510 33P
R2506 1M
D2501 MA165
D2502 MA165
R1502 180
R1503 27K
R1504 27K
R6001 4700

S-VHS CASSETTE
S1502 VST0325
R1506 10K
R6045 100K

C2512 25V4.7
C2511 6V22 (N)
C6041 0.1
C2514 0.1
TW2002
C2508 0.1
C2513 3900P

R6031 6800
C6017 680P

R6019 10K
R6020 39K
R1501 120
R6021 27K
R6025 43K
R6022 100
R6026 39K
C6016 0.01
C6015 16V10
R6023 27K
R2507 270K
R2508 43K
TL6010

Q1501 PNB2301MBV (T-PHOTO)
Q1502 PNB2301MAV (S-PHOTO)
SENSOR D1501 SIR505S

TW2001
R6017 1K
R6083 220
R1505 100

R6072 22K
Q6008 2SD601A (AV1 PB:ON)
QR6001 UN2215 (SWITCHING)
D6004 1SS355
R6073 470K
R6071 18K
R6074 470
R6075 22K
R6076 15K

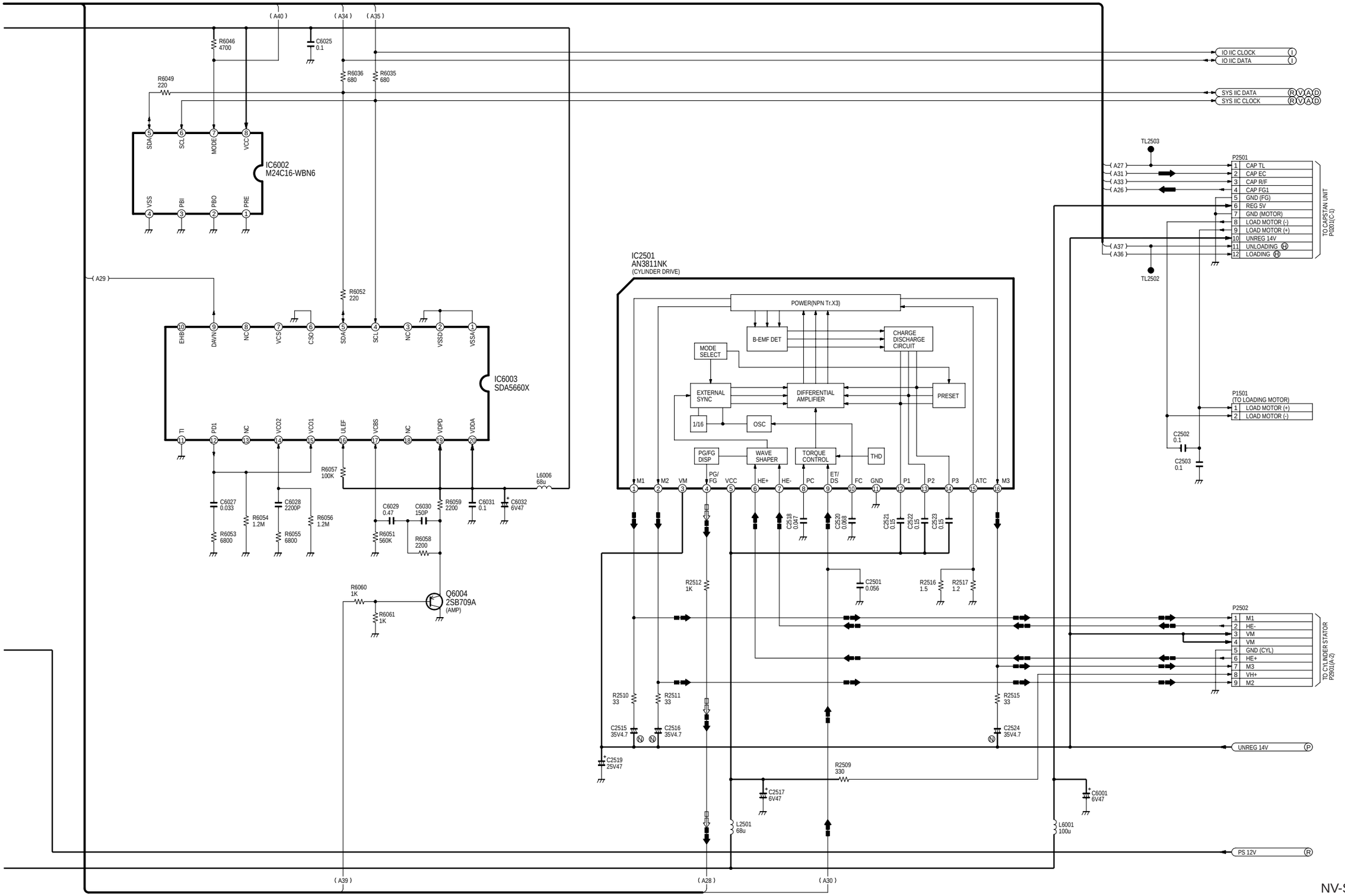
MODE SW
S1501 K0G934A00002

IC6001 C2CBJG000262

(R) N.SW 5V
(T) BACK UP 5V
(R) SLEEP (H)
(V) OSD VIDEO (A20)
(V) Y/C VIDEO OUT (A19)
(V) FSC (A18)
(R) POWER OFF (L) (A17)
(R) FIP (L) (A16)
(I) VIDEO OUT (A15)
(A) RFC MUTE (H) (A14)
(I) OSD PULSE (A12)
(T) FIP CS (A11)
(V) MESECAM DET (H) (A10)
(T) S.DATA (A8)
(T) S.CLOCK (A7)
(T) P.FAIL (L) (A6)
(I) AV3 S-VHS IN (L) (A5)
(T) POWER KEY (A2)
(T) SAFETY TAB (L) (A1)
(R) AFC S-CURVE (B1)
(V) TRACKING ENV. (B2)
(V) KILLER (L) (B4)
(V) PAL EP (H) (B5)
(I) AV2 PB (H) (B6)
(V) FREQ.ADJ (B7)
(V) ART V/H/N (B8)
(I) IR (B9)
(V) HEAD SW (B10)
(A) A.HEAD SW (B11)
(I) PROG (H) (B12)
(A) ABS NORMAL (L) (B14)
(V) V.EE (L) (B15)
(A) D.FM REC (H) (B16)
(V) D.A.REC (H) (B17)
(V) BIAS (H) (B18)
(V)(A) MUTE (H) (B19)
(R) SW2 (B20)
(V) S-VHS DET (H) (B21)
(T) RESET (L) (B22)
(I) AV1 PB (H) (B23)
(V) CYL HEAD (-)
(V) CYL HEAD (+)
(R) REG 5V
(R) PS 5V
(R) GND
(R) GND(SYS)
(R) GND(FIP)
(R) GND(CTL)
(R) GND(FG)
(R) GND(MOTOR)

1 T-REEL PULSE
2 S-REEL PULSE
3 P-FAIL (L)
4 CYL FF
5 CAP FF
6 HALF WAVE
7 CAP RIP
8 12SHz
9 IIC DATA
10 IIC CLOCK
11 FLD/T2 CLOCK
12 FLD/T2 DATA IN
13 FLD/T2 DATA OUT
14 EEP ROM CLOCK
15 LP (H)
16 MESECAM DET (H)
17 FLD CS
18 LOADING (H)
19 UNLOADING (H)
20 SLEEP (H)
21 OSD PULSE
22 AD.V/ SECAM MIX
23 SECAMPAL
24 GND
25 CV IN(EDS)
26 A.MUTE (H)
27 HLF
28 5V(OSD)
29 CV OUT
30 LECHA
31 POS.SW3
32 POS.SW2
33 POS.SW1
34 RESET (L)
35 32KHz IN
36 32KHz OUT
37 5V(D)
38 12MHz IN
39 12MHz OUT
40 GND(D)
41 POWER OFF (L)
42 FIP (L)
43 12MHz START (H)
44 LC OSC IN
45 LC OSC OUT
46 GND
47 4FC LPF
48 OSD FSC IN
49 GND(OSD)
50 CV IN
51 S TAB (L)
52 POWER KEY
53 CNR OFF (H)
54 SECAM ID IN (L)
55 DAVN
56 FG AMP OUT
57 FG AMP IN
58 GND(A)
59 AV3 S IN (L)
60 CYL PFG
61 O REF
62 I REF
63 S CAS (L)
64 CYL HEAD(-)
65 CYL HEAD(+)
66 CYL AMP REF
67 PB CTL OUT
68 +5V(A)
69 +5V(AD)
70 EX.FF/REW (L)
71 A DEF (H)
72 KILLER DET (L)
73 AFC S
74 SLP (H)
75 CPB
76 WSTJ/T2
77 S-PHOTO
78 T-PHOTO
79 TRACKING ENV.
80 AV1 PB (H)
81 CURR.LIMIT
82 F.ADJ.
83 ART V/H/N
84 IR
85 AV PB (H)
86 AV PB (M)
87 EEP WR
88 VIDEO H SW
89 AUDIO H SW
90 PROG.ON (H)
91 BW (H)
92 TBC MODE O
93 ABS NORM (H)
94 V.EE (L)
95 D.FM REC (H)
96 D.A.REC (H)
97 BIAS (H)
98 FM MUTE (H)
99 PAL-I/ BGDK
100 S-VHS DET

NV-SV120EB/EC/EP
SYSTEM CONTROL & SERVO SECTION SCHEMATIC DIAGRAM



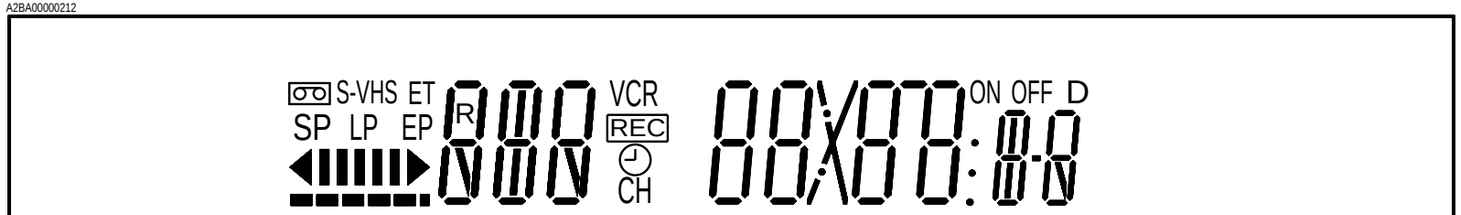
NV-SV120EB/EC/EP
SYSTEM CONTROL & SERVO SECTION SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
SYSTEM CONTROL & SERVO SECTION SCHEMATIC DIAGRAM

Ⓟ :TO POWER TRANSFORMER SECTION
Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION

DP7501
A2BA00000212



F- 1 2 | P1 5 P2 6 P3 7 P4 8 P5 9 P6 10 P7 11 P8 12 NC 13 P9 14 P10 15 P11 16 P12 17 P13 18 P14 19 P15 20 P16 21 P17 22 P18 23 NC 24 NC 25 NC 26 NC 27 NC 28 NC 29 NC 30 NC 31 NC 32 1G 33 2G 34 3G 35 4G 36 5G 37 6G 38 7G 39 NC 40 NC 41 | F+ 44 45

Ⓡ HEATER (+)
R7507 39
C7501 0.01
Ⓟ HEATER DC (-)
D7501 MA4240NM
C7502 50V10
R7511 820
R7510 820
Ⓡ FIP -29V
R7509 100

-10.1 36 S1 | -15.3 35 S2 | -25.3 34 S3 | -25.3 33 S4 | -10.1 32 S5 | -25.3 31 S6 | -20.3 30 S7 | -20.3 29 S8 | -20.3 28 S9 | -15.3 27 S10 | -20.2 26 S11 | -20.2 25 S12 | -15.3 24 S13 | -15.3 23 S14 | -20.4 22 S15 | -25.3 21 S16 | -20.4 20 S17 | -29.4 19 VEE

IC7501
M35502AFP

S DATA 1 (4.7) | S CLOCK 2 (4.8) | CS Ⓛ 3 (2.4) | A3 4 (5.2) | A2 5 (5.2) | A5 6 (5.2) | A4 7 (5.2) | VSS 8 | OSC 9 (2.3) | VCC 10 (5.2) | G1 11 (-25.7) | G2 12 (-25.7) | G3 13 (-25.7) | G4 14 (-21.1) | G5 15 (-21.1) | G6 16 (-25.7) | G7 17 (-25.7) | S18 18 (-29.4)

R7512 0
C7503 12P

Ⓢ S.DATA
Ⓢ S.CLOCK
Ⓢ FIP CS
Ⓢ SAFETY TAB Ⓛ
SAFETY TAB
S7507 K0C111A00006
Ⓘ POWER SW
Ⓢ POWER KEY
R7521 22K
R7517 10K
R7518 10K
R7513 30K
R7515 30K
R7516 30K
R7514 30K
Ⓡ N.SW 5V
Ⓡ GND
C7512 0.1
C7504 6V100
IC7504
C0EBH0000218
(RESET)
IC7503
C0EBE0000211
(RESET)
Ⓢ P.FAIL Ⓛ
C7511 0.1
C7510 0.01
R7535 10K
C7509 6800P
D7503 RB441PT-77
R7534 180
C7507 VCE0073
C7508 6V220
Ⓢ RESET Ⓛ
Ⓢ BACK UP 5V
Ⓘ AN2
Ⓘ AN0

CH UP S7504 EVQ11L07B
R7506 4300
R7505 5600
R7504 8200
PLAY S7511 EVQ11L07B
R7537 12K
REW S7512 EVQ11404M

CH DOWN S7502 EVQ11L07B
R7503 4300
REC S7501 EVQ11L07B
R7502 5600
STOP S7515 EVQ11L07B
R7501 8200
TIMER REC S7513 EVQ11L07B
R7538 12K
FF S7514 EVQ11404M

EJECT S7505 EVQ11L07B
R7519 4300
R7536 5600
R7522 8200
TIMER CHECK S7517 EVQ11L07B
R7520 12K

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
TIMER SECTION SCHEMATIC DIAGRAM

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

(EP)
R0714 5600
R0732 4700
R0731 100
LB0701 VLP0147
R0713 0
C0724 330P:EB 220P:EC/EP
R0740 470:EB/EC 270:EP
R0717 470
R0711 180
R0745 3.3M
C0707 50V2.2
T0701 EQV5EC083P:EB EQV5EC082P:EC EQV5EC081P:EP
R0729 10K
R0730 10K
R0701 100K
(EB/EC)
(EC)
(EB)
R0728 0
(EP)
R0709 100K
C0717 33P
C0708 50V 0.47
R0727 0
C0719 0.1
3.1 2.4 1.6 3.0 2.7 2.2 3.3 4.3 4.3 1.8 0 1.3
1 2 3 4 5 6 7 8 9 10 11 12
PK0701
TO POWER SUPPLY/ RF SECTION DU7601 (B-9)
DU7601-19 SW1 1
DU7601-20 SW2 2
DU7601-21 3
DU7601-22 SIF OUT 4
DU7601-23 AFC S-CURVE 5
DU7601-24 TUNER VIDEO 6
DU7601-25 REG 5V 7
DU7601-26 8
DU7601-27 GND 9
1.6
2.4
2.6
5.0
R0742 150
Q0702 2SD601A (AMP)
3.6
3.3
2.6
R0741 220
C0721 82P:EB 120P:EC 56P:EP
R0743 1K
IC0701 LA75503
BPF
AMP SW
EQ AMP
TRAP
LPF
VCO
FLL
AGC
AFT AMP
BPF
LIM AMP
FM DET
S PLL
FIL CONT
VIDEO DET
APC DET
1ST SIF DET
VIF AMP
IF AGC
1ST AMP
RF AGC
DEEMPHP
24 23 22 21 20 19 18 17 16 15 14 13
2.6 2.4 2.2 3.3 2.8 2.8 5.0 1.6 0.1 4.0 2.4
D0702 0
C0701 1
C0713 6V330
C0704 0.033
R0705 4700
R0708 10K
C0714 1
VR0701 10KB
R0707 39K
C0702 1000P
C0703 1
R0719 4700
C0712 0.1
X0704 VLF1495:EB VLF1493:EC VLF1497:EP
10 8 7 6
1 2 3 4 5
L0701 0.22u:EB 0.27u:EC/EP
(EP)
X0702 VLF1431
X0701 VLF1417:EB VLF1416:EC VLF1430:EP
K7501 56P
(EC)
C0710 0.01
L0703 1.8u:EB 2.2u:EC/EP
R0725 100
C0715 12P:EB 3P:EC/EP
PP0701 (TO TUNER UNIT)
4MHz 1
AGC 2
IF 3
GND 4
C0711 16V22
R0715 22K

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
TV DEMODULATOR PACK SCHEMATIC DIAGRAM

F E D C B A

1 2 3 4 5 6 7 8

Ⓡ :TO POWER SUPPLY/RF SECTION
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION
Ⓐ :TO Hi-Fi AUDIO SECTION
Ⓘ :TO INPUT/OUTPUT SECTION
Ⓓ :TO DECODER SECTION

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

H G F E D C B A

1 2 3 4 5 6 7 8 9 10

(A5) (A6) (A1) (A2) (A7) (A3) (A10)

C3042 1

Q3001 2SD601A (AMP)

R3015 3300

R3017 1K

R3009 15K

R3010 10K

TW3001

C3028 50V4.7

R3011 100

B-Y INVERT

COME

C3027 50V1

TANK

CR DET

MESECAM DET

C5007 0.1

COLOR LEVEL DETECTOR

DET

DET

L5001 68u

C5005 0.1

C5006 6V47

ENVDET

HPF

C5004 0.01

LB5004 0

C5003 0.01

LB5003 0

C5002 0.01

C5001 0.01

SP2

SP1

VCA

CH2

CH1

REC MUTE

EXT

INT

SP

P4002
(TO A/C HEAD)
AUDIO ERASE IN 1
GND 2
AUDIO HEAD (R) 3
AUDIO HEAD (W) 4
CTL HEAD (-) 5
CTL HEAD (+) 6

P4001
(TO FULL ERASE HEAD)
FULL ERASE OUT 1
FULL ERASE IN 2

R4014 16K

C4020 220P

C4021 0.022

T4001 EQQ7QF024P

R4017 3300

Q4005 2SD602A (OSC)

C4022 1500P

C4024 0.022

BIAS 5V
GND
GND (SYS)
GND (A)
GND (HA)
GND (V)
GND (NA)

LB4004 0

R4020 4700

C4026 16V10

R4019 6800

C4025 10V22

Q4006 2SB710A (ERASE HEAD DRIVE)

R4018 4700

L4002 68u

C4023 10V47

BIAS Ⓗ

QR4005 UN2212 (BIAS Ⓗ:ON)

P5001
(TO CYLINDER UNIT)
LP/EP R 1
LP/EP COM 2
LP/EP L 3
SP R 4
SP COM 5
SP L 6
GND(HA) 7
AUDIO HEAD L 8
AUDIO HEAD COM 9
AUDIO HEAD R 10

B1 B2 B3 B4 B5 B6

C4008 25V3.3

LB4001 J0JBC0000070

C4003 4700P

R4003 22K

C4004 1200P

R4002 100K

R4001 3300

QR4001 UN2211 (PAL EP Ⓗ:ON)

C4001 6V100

R4006 22K

C4006 25V4.7

AUDIO HEAD R
AUDIO HEAD COM
AUDIO HEAD L

C3071 0.1

PAL EP Ⓗ
D.A.REC Ⓗ

QR4002 UN2111 (D.A.REC Ⓗ:OFF)

R4015 4700

Q4003 2SD1149 (PB:ON)

R4016 2200

Q4004 2SD601A (PB:ON)

TUNER AUDIO (N)
AUDIO IN (N)
AUDIO OUT (N)

B7 B8 B9

PS 5V
VIDEO 5V

R4008 330K

C4011 8200P

R4007 10K

C4009 6V22

LB4002 0

R4004 220

L4001 0

C4013 0.01

C4014 6V47

C4012 50V4.7

SP ON

FH TRAP

LB4003 J0JBC0000070

PREAMP

REC ON

EP ON

REC EQ

R

P

VCA

DET

C4005 6V22

BAND GAP

IC3001
HA118425SF

C4016 0.1

C4017 16V10

C4018 50V1

C4019 16V10

R4013 100

R4009 33K

R4011 24K

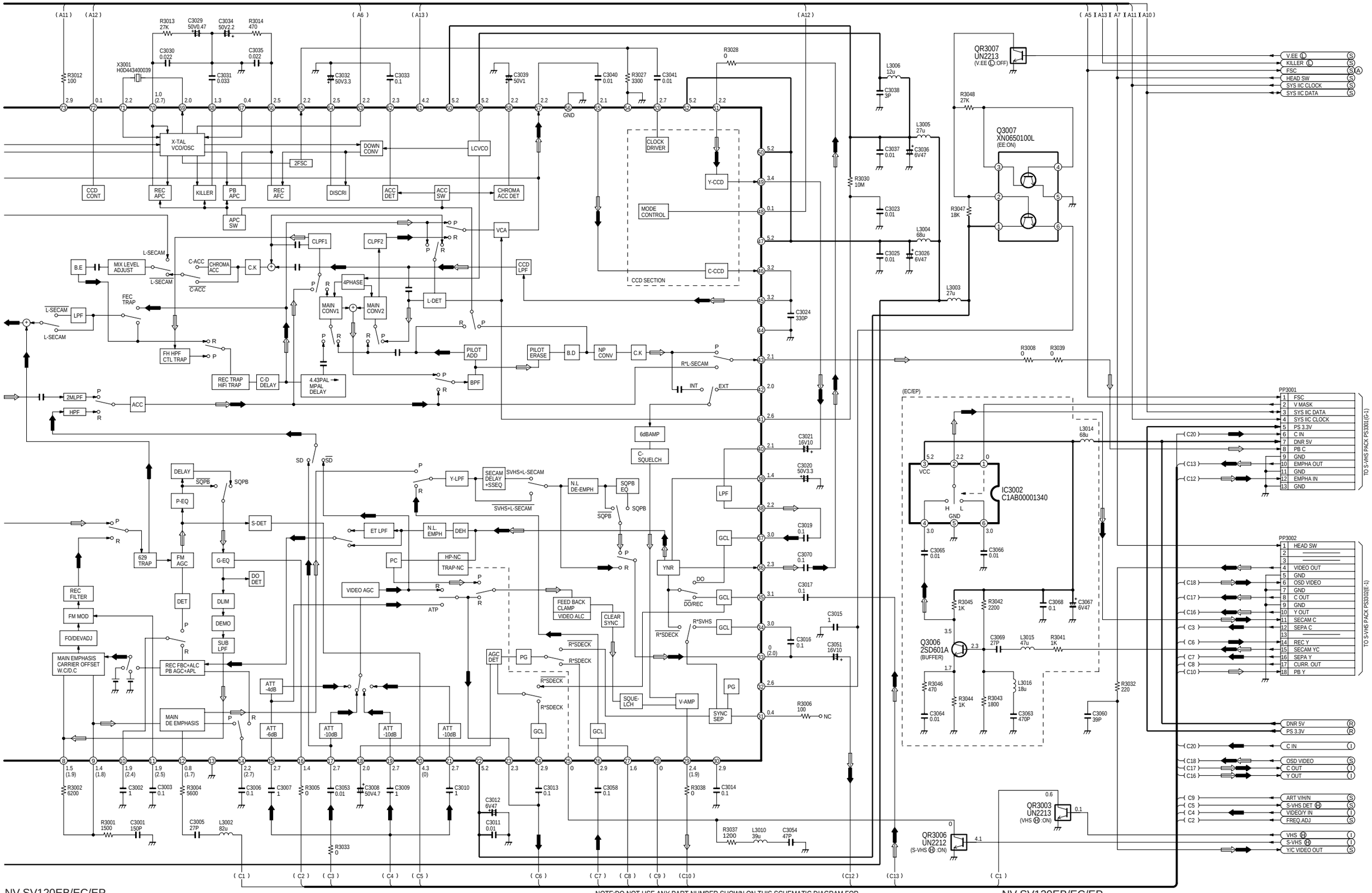
R4012 820

R4010 10K

NOTE:THE MEASUREMENT MODE OF THE DC VLOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.(SP MODE)

NV-SV120EB/EC/EP
LUMINANCE & CHROMINANCE/AUDIO SECTION SCHEMATIC DIAGRAM

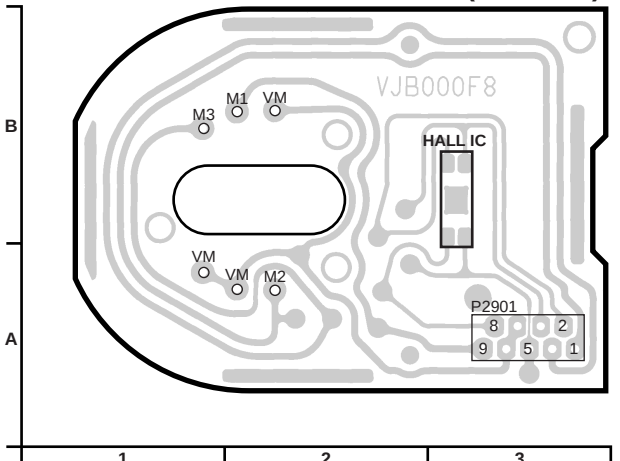


NV-SV120EB/EC/EP
LUMINANCE & CHROMINANCE/AUDIO SECTION SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
LUMINANCE & CHROMINANCE/AUDIO SECTION SCHEMATIC DIAGRAM

(VEM0715)



CYLINDER STATOR UNIT	
Integrated Circuit	
HALL IC	B-3
Connector	
P2901	A-3

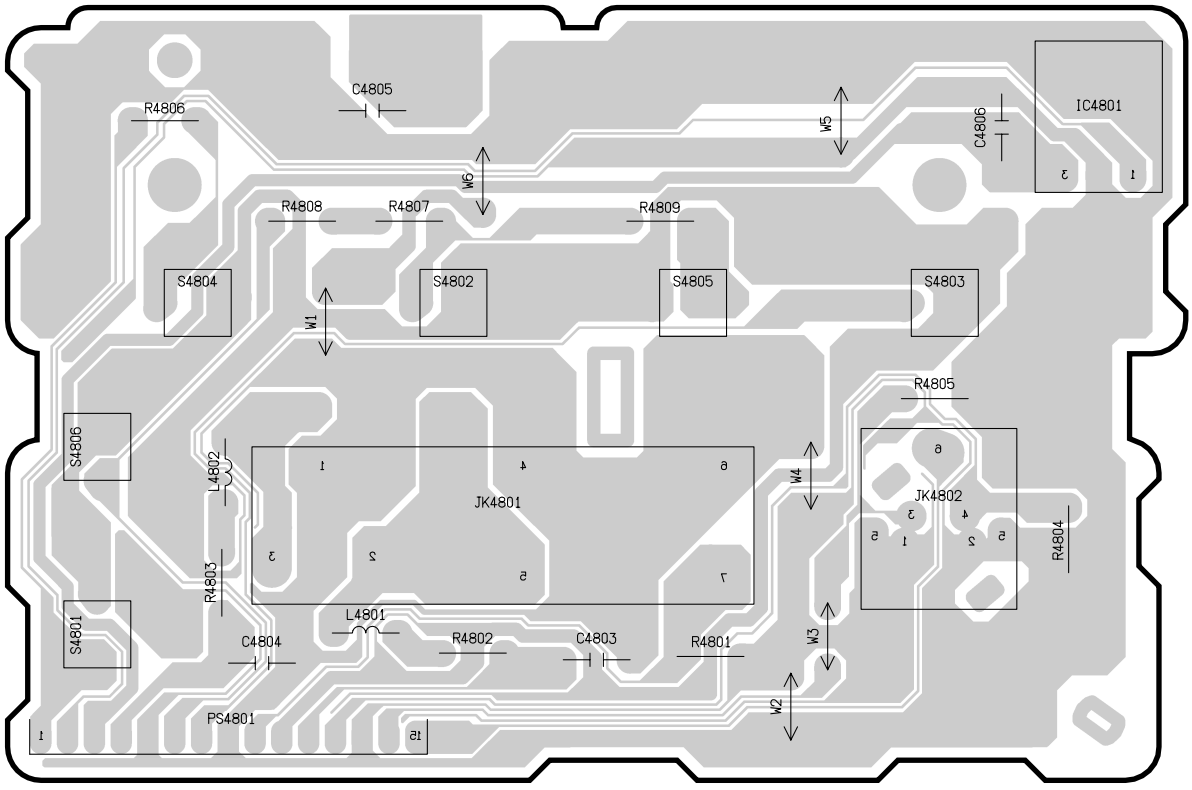
ADDRESS INFORMATION

NV-SV120EB/EC/EP
CYLINDER STATOR UNIT

FRONT C.B.A.	
Integrated Circuit	
IC4801	C-4
Connector	
PS4801	A-2

ADDRESS INFORMATION

(VEP04832A)

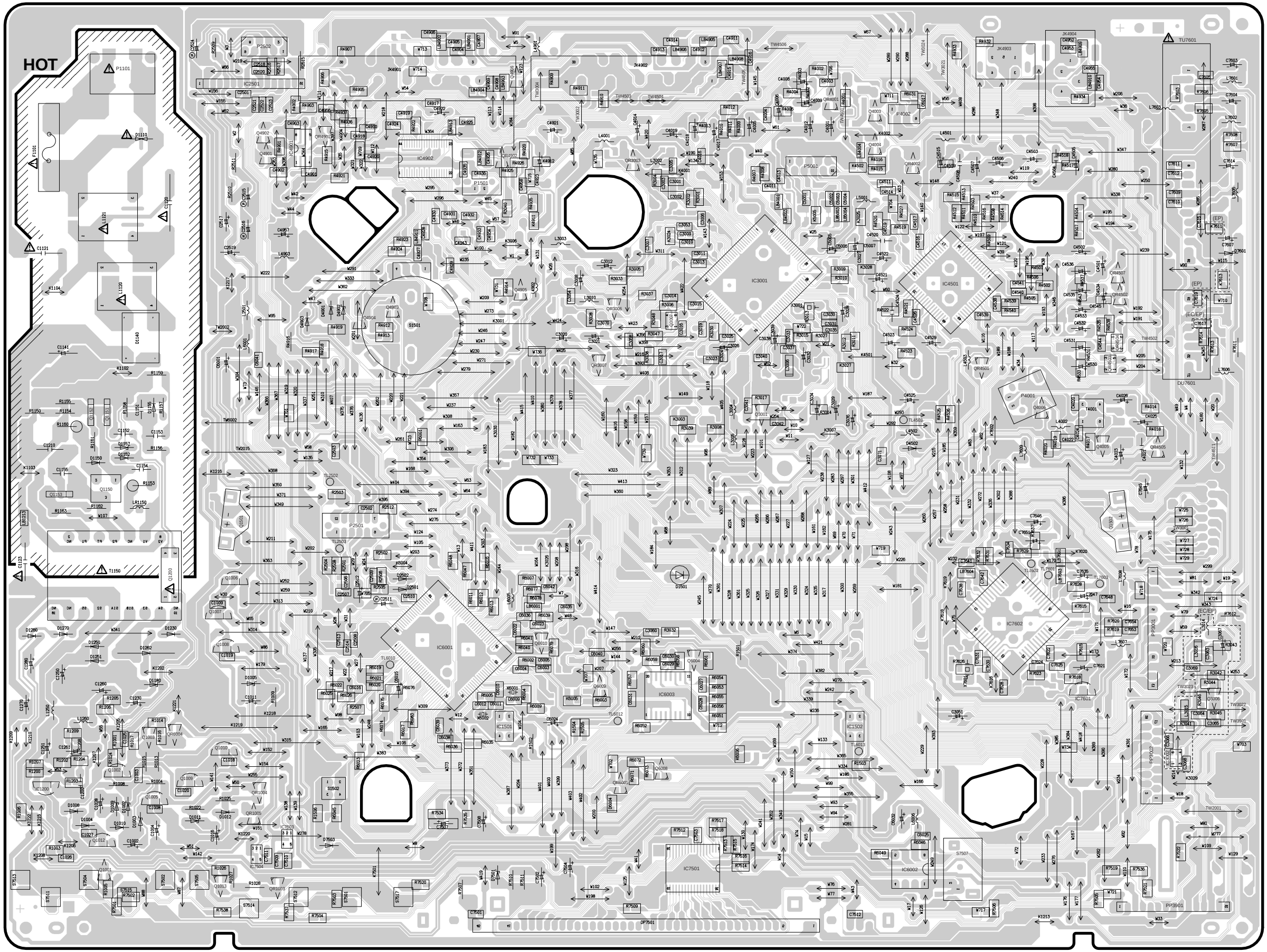


NV-SV120EB/EC/EP
FRONT C.B.A.

C B A

1 2 3 4 5

(VEP06F09C: NV-SV120EB) (VEP06F09B: NV-SV120EC) (VEP06F09E: NV-SV120EP)



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

MAIN C.B.A.

Transistor	
Q1001	A-1
Q1002	B-1
Q1003	B-2
Q1005	B-2
Q1006	C-2
Q1007	C-2
Q1008	C-2
Q1009	B-2
Q1010	B-2
Q1012	A-1
Q1013	A-2
Q1150	D-1
Q1151	D-1
Q1152	D-1
Q1153	C-1
Q1200	C-2
Q1501	C-2
Q1502	C-8
Q3001	D-5
Q3006	B-8
Q3007	E-5
Q4003	F-6
Q4004	F-6
Q4005	D-8
Q4006	D-7
Q4901	F-2
Q4902	F-2
Q4903	E-3
Q4904	E-3
Q4905	E-4
Q4906	F-4
Q6004	B-5
Q6008	B-5
Q6009	B-4
Q6010	C-4
Transistor & Resistor	
QR1003	A-2
QR1004	B-2
QR1005	A-2
QR3003	F-5
QR3006	E-5
QR3007	D-4
QR4001	F-6
QR4002	F-6
QR4005	D-8
QR4501	D-7
QR4502	E-8
QR4503	D-8
QR4504	D-8
QR4507	E-8
QR4901	F-3
QR4902	F-4
QR6001	B-5
QR6004	B-2

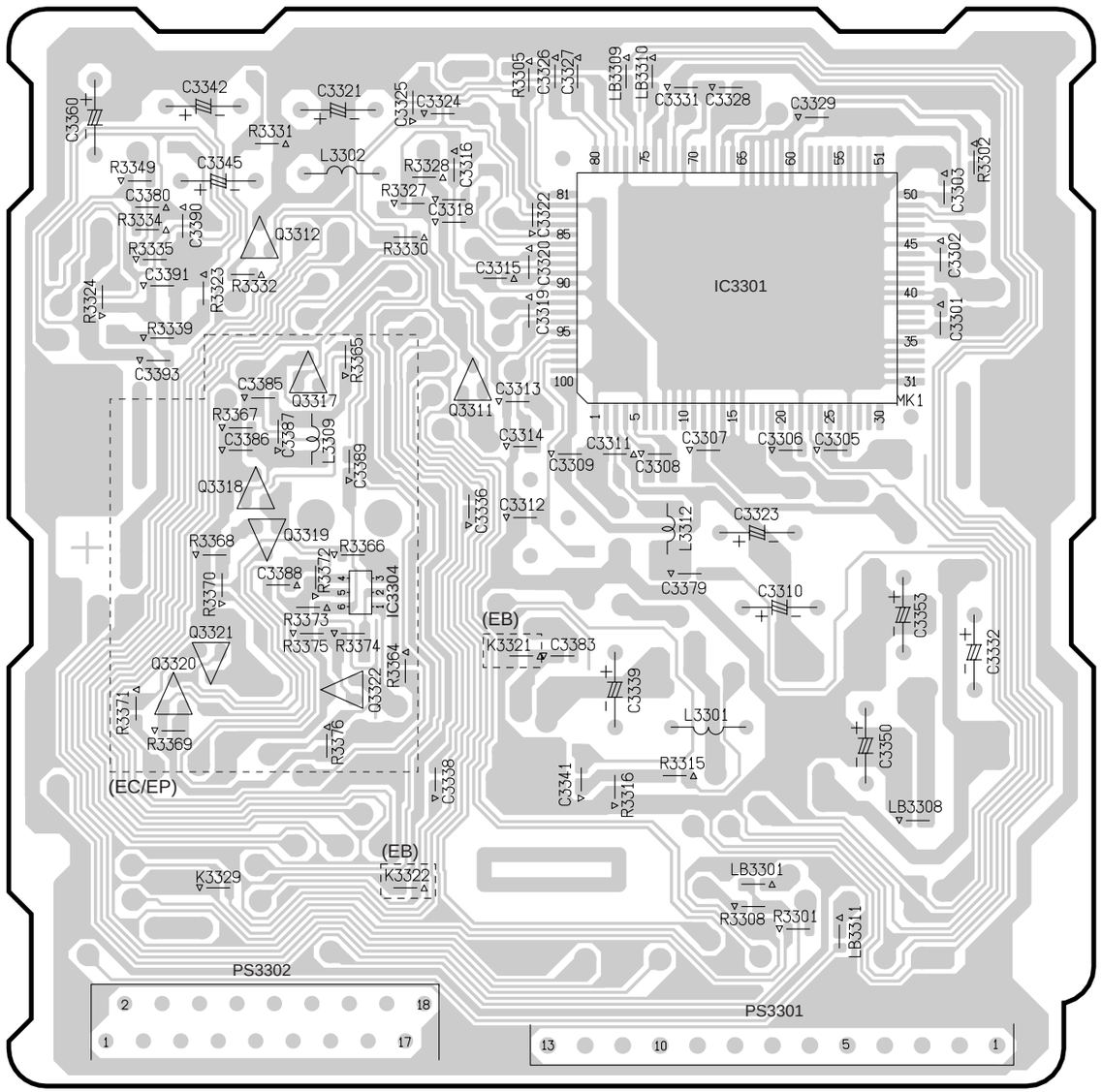
Integrated Circuit	
IC1200	B-1
IC1501	B-4
IC1502	B-6
IC2501	F-2
IC3001	E-5
IC3002	B-8
IC4501	E-7
IC4901	F-3
IC4902	F-3
IC6001	C-3
IC6002	A-6
IC6003	B-5
IC7501	A-5
IC7503	A-3
IC7504	A-2
IC7601	B-7
IC7602	C-7
Test Point	
TL2502	D-3
TL2503	C-3
TL4503	D-6
TL6010	B-3
TL6012	B-5
TL6013	B-6
TL7601	C-7
TL7602	C-7
TL7603	C-8
TW2001	A-8
TW2002	D-2
TW2015	D-2
TW3001	C-8
TW3002	F-4
TW3004	F-4
TW3021	F-7
TW3022	B-8
TW3023	B-8
TW3024	F-7
TW3901	B-8
TW4501	F-6
TW4502	D-8
TW4503	F-5
TW4504	F-5
TW4505	F-5
TW4506	F-6
TW4511	D-8
TW6002	D-2
Connector	
P1101	F-1
P1501	E-4
P2501	C-3
P2502	F-2
P4001	D-7
P4002	F-6
P5001	F-6
PP3001	C-8
PP3002	B-8
PP3901	A-8
TU7601	F-8

ADDRESS INFORMATION

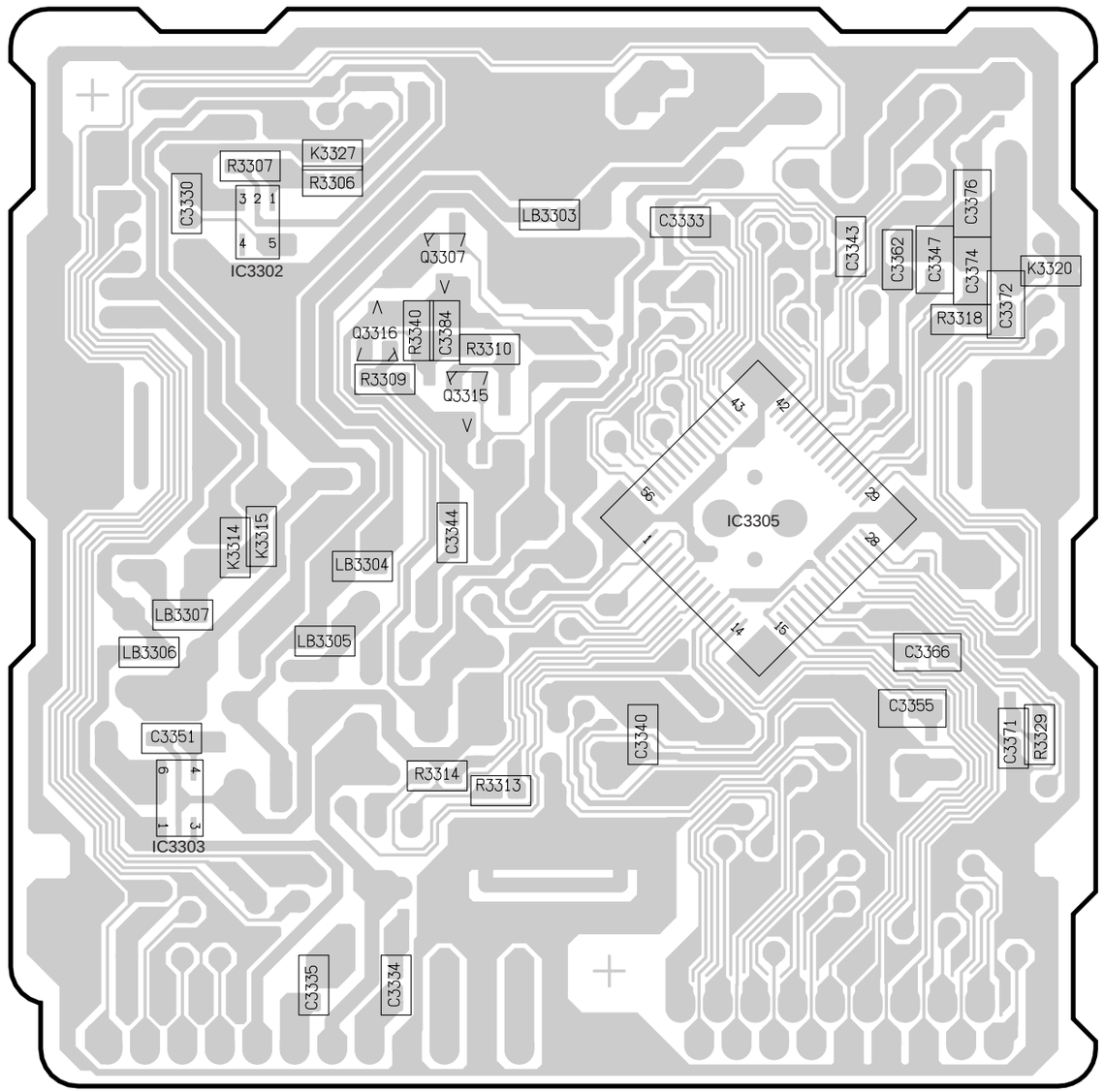
S-VHS PACK C.B.A.			
Transistor		**Integrated Circuit**	
Q3307	D-7	IC3301	D-4
Q3311	D-3	IC3302	D-6
Q3312	D-2	IC3303	B-6
Q3315	D-7	IC3304	C-2
Q3316	D-7	IC3305	C-8
Q3317	D-2	**Connector**	
Q3318	C-2	PS3301	A-4
Q3319	C-2	PS3302	A-2
Q3320	C-2		
Q3321	C-2		
Q3322	B-2		

ADDRESS INFORMATION

(VEP03G25B: NV-SV120EB) (VEP03G25A: NV-SV120EC/EP)



(COMPONENT SIDE)



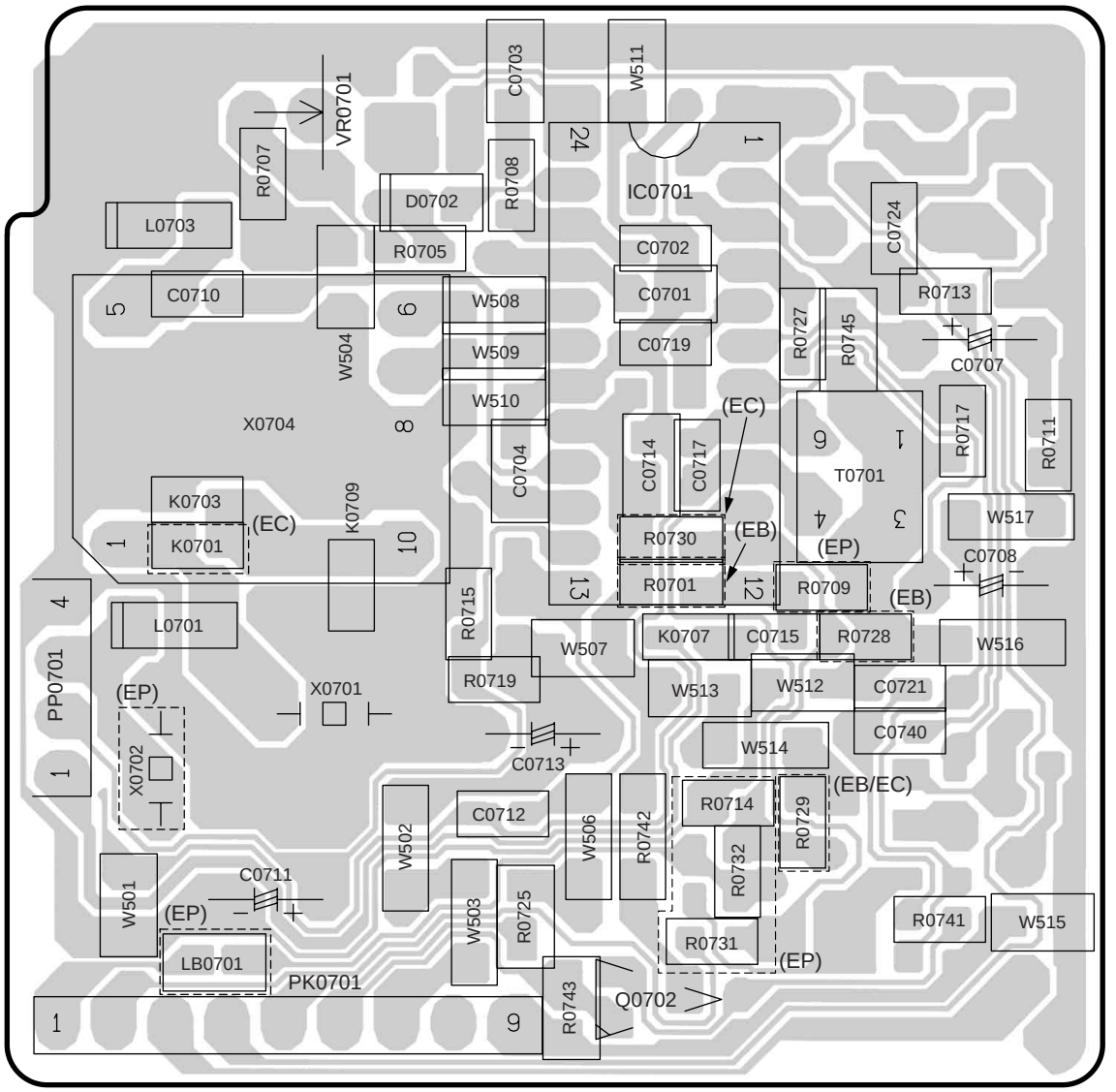
(FOIL SIDE)

NV-SV120EB/EC/EP
S-VHS PACK C.B.A.

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q0702	A-3
Integrated Circuit	
IC0701	D-3
Adjustment	
T0701	C-4
VR0701	D-2
Connector	
PK0701	A-2
PP0701	B-1

ADDRESS INFORMATION

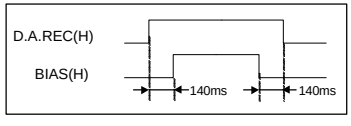
(VEP07A23T:NV-SV120EB)
(VEP07A23S:NV-SV120EC)
(VEP07A23U:NV-SV120EP)

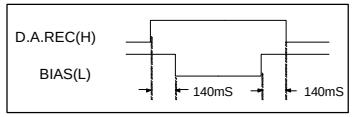


NV-SV120EB/EC/EP
TV DEMODURATOR PACK C.B.A.

Pin No.	Signal Name	I/O	Describe	P-OFF	P-SAVE	P-FAIL	Reset
1	A.DEF(H)	O	Output signal for audio defea and decoder IC reset.	Low	Low	Low	Low
2	CKILLER DET(L)	I	Detection of COLOR KILLER active.	In	In	In	In
3	AFC S	I	S curve input from tuner.	In	In	In	In
4	SLP(H)	O	Output signal depens on tape speed. (During N10H or P9H: High) (Except N10H and P9H: Low)	Low	Low	Low	Low
5	CPB	I	PB input from AV2. *3.21v ~ :High *1.23v ~ 3.21v :Middle * ~ 1.23v : Low	In	In	In	In
6	N/S/T2	I	Normal/Service/Test2/Test3 select. * 4.0v ~ :NORMAL mode * 2.5v ~ 4.0v :SERVICE mode * 1.0v ~ 2.5v :TEST2 mode * 0v ~ 1.0v :No define (spare)	In	In	In	In
7	S-PHOTO	I	Photo sensor input from supply side. (more than 2.6V: black / less than 2.4V: white)	In	In	In	In
8	T-PHOTO	I	Photo sensor input from take up side. (more than 2.6V: black / less than 2.4V: white)	In	In	In	In
9	TRACKING_ENVE	I	Video envelope input for auto tracking and CVC.	In	In	In	In
10	AV1_8IN	I	PB input from IC3001. * 3.21v ~ : High * 1.23v ~ 3.21v: Middle * ~ 1.23v: Low	In	In	In	In
11	CURRENT_LIMIT	O	Current limit for capstan driver.	Low	Low	Low	Low
12	F ADJUST	O	Analogue voltage output for HEAD frequency response adjustment.	Low	Low	Low	Low
13	ART.V/H/N	O	Artificial V synchronization signal.	Low	Low	Low	Low
14	IR	I	Interrupt input from IR sensor.	In	In	In	In
15	AVPB-H(L)	O	Output signal for AV2-PB "H". (2 Scart Model) Output signal for AV1-PB "H". (1 Scart Model) * H/M/L is output to 21pin-(8) when both terminals are set as follows.	High	High	Low	High
16	AVPB-M(H)	O		Low	Low	Low	Low
17	EEP_WR	O	Write enable for EEPROM. *H:READ only L:Write	High	High	Low	High
18	VIDEO.H.SW	O	Output signal for video HEAD switch.	Low	Low	Low	Low
19	A.H.SW	O	Output signal for FM audio HEAD switch.	Low	Low	Low	Low
20	PROG ON(H)	O	I/O control to switch IIC bus for LW-programmer. H:IIC bus is connected to AV2. L:IIC bus is not connected to AV2.	Low	Low	Low	Low
21	B/W(H)	O	Output signal for B/W mode.	Low	Low	Low	Low
22	NC	O	Non connect. (Low Fix)	Low	Low	Low	Low
23	ABS_NORM(H)	I	Input signal for FM audio enverope level detection. (Also serves that the Automatic Adjustment is completed)	In	In	In	In
24	V EE(L)	O	Output signal for switch between EE and VV.	Low	Low	Low	Low
25	D.FM.REC(H)	O	Control signal for FM audio recording current)	Low	Low	Low	Low
26	D.A.REC(H)	O	Control signal for normal audio recording current.	Low	Low	Low	Low
27	BIAS(H)	O	Control signal for FM audio recording current.	Low	Low	Low	Low
28	FM.MUTE(H)	O	Output signal for audio mute control.	High	High	Low	High
29	PAL-I/BG/DK(SYS4)	O	Output terminal for broad cast system to control the video circuit.	Not fix	Low	Low	Low
30	S-VHS DET(H)	I	Detection between SVHS and VHS.	In	In	In	In

Pin 8	Setting	
	AVPB-H(L)	AVPBM-(H)
High	L	Hi-z
Middle	H	Hi-z
Low	H	L



Pin No.	Signal Name	I/O	Describe	P-OFF	P-SAVE	P-FAIL	Reset
31	POS.SW3	I	Input terminal for mechanism position. 	In	In	In	In
32	POS.SW2	I		In	In	In	In
33	POS.SW1	I		In	In	In	In
34	RESET(L)	I	MICOM reset input terminal.	In	In	In	In
35	32KHz IN	I	Sub oscillator input.	---	---	---	---
36	32KHz OUT	O	Sub oscillator output.	---	---	---	---
37	+5V(D)	-	Power.	---	---	---	---
38	12MHz.IN	I	Main oscillator input.	---	---	---	---
39	12MHz.OUT	O	Main oscillator output.	---	---	---	---
40	GND(D)	-		---	---	---	---
41	POWER OFF(L)	O	Control signal for power circuit. *Low is existed when turning off the power supply for concerned circuit. *High is existed while power is supplied to mechanism and/or concerned circuit, although it seems to be power off.	Low	Low	Low	Low
42	FIP ON(L)	O	Control signal for FIP on/off. P-OFF in power save mode: "H" is output. Other than above: "L" is output. (Output switching timing of FIP"L" is same with the switching timing of POWER OFF "L".)	Low	High	Low	Low
43	12M.START(H)	I	Starting clock select terminal at releasing RESET.	---	---	---	---
44	LC.OSC IN	I	OSC terminal for OSD dot clock.	---	---	---	---
45	LC.OSC OUT	O	OSC terminal for OSD dot clock.	---	---	---	---
46	GND	I	GND	---	---	---	---
47	4FC.LPF	I	NC	---	---	---	---
48	OSD.FSC IN	I	NC	---	---	---	---
49	GND(OSD)	-	GND	---	---	---	---
50	CVIN	I	Composite video signal input terminal.	---	---	---	---
51	LECHA	I	Composite video signal white level input terminal.	---	---	---	---
52	CVOUT	O	CG video output teminal.	---	---	---	---
53	5V(OSD)	-		---	---	---	---
54	HLF	I	LPF connection terminal for SLICER (Used for OSD dot clock.)	---	---	---	---
55	AMUTE(H)	O	Audio mute signal only for RF convertor.	High	High	Low	High
56	CVIN(EDS)	I	Composite video signal input terminal for SLICER.	In	In	In	In
57	GND	I		---	---	---	---
58	SECAM/PAL(SYS2)	O	Output terminal for the unit recognition result of broad cast system.	Low	Low	Low	Low
59	SECAM.V.IN	I	Chroma input terminal for SECAM SUPERIMPOSE.	---	---	---	---
60	OSD PULSE	O	Abstraction signal for BOX from the video signal at SUPERIMPOSE.	Low	Low	Low	Low
61	SLEEP(L)	O	Power circuit control signal for super power save mode. *P-OFF in power save mode: "L" is output. Other than above: "H" is output. *Output switching timing of FIP "L" is same with the switching timing of POWER OFF "L".)	High	Low	Low	High
62	UNLOADING(H)	O	Control signal for Loading motor forward. *High is existed when the loading motor rotates reverse direction and/or breaking.	Low	Low	Low	Low
63	LOADING(H)	O	Control signal for Loading motor reverse. *High is existed when the loading motor rotates forward direction and/or breaking.	Low	Low	Low	Low
64	FLD CS	O	FLD chip select terminal.	Not fix	Not fix	Low	Low
65	MESECAM DET(H)	I	Detection between MESECAM and NORMAL in playback mode.	In	In	In	In
66	LP(H)	O	Output signal depens on tape speed in both EE and VV modes. * During N4H,N6H,P6H or P9H: High. * Other than above speed: Low.	Low	Low	Low	Low
67	NC	O	Non connect. * Low fixed.	Low	Low	Low	Low
68	FLD DATA OUT	O	Serial data output signal for FIP driver.	Not fix	Not fix	Low	Low
69	FLD DATA IN	I	Serial data input signal for FIP driver.	Not fix	Not fix	In	In
70	FLD CLK	O	Serial clock signal for FIP driver.	Not fix	Not fix	Low	Low
71	IIC CLK	O	IIC clock for all IIC devices	Not fix	Not fix	Low	Low
72	IIC DATA	O	IIC data for all IIC devices	Not fix	Not fix	Low	Low
73	125Hz	O	125Hz output for adjustment of clock accuracy . (Output in only TEST MODE 2.)	Low	Low	Low	Low
74	CAP.R/F	O	Control signal for capstan motor diriction.	Low	Low	Low	Low

Pin No.	Signal Name	I/O	Describe	P-OFF	P-SAVE	P-FAIL	Reset
75	HALF_WAVE(H)	O	Control signal for switching capstan motor mode FAST and SLOW.	In	In	In	In
76	CAP.ET	O	Torque control signal for capstan motor.	0V	0V	Low	0V
77	CYL.ET	O	Torque control signal for cylinder motor.	4.213V	4.213V	Low	4.213V
78	P FAIL	I	Interrupt input signal for power fail detection.	In	In	In	In
79	S.REEL.PULSE	I	Input signal from supply reel sensor.	In	In	In	In
80	T.REEL.PULSE	I	Input signal from take up reel sensor.	In	In	In	In
81	S TAB(L)	I	Input signal from Safety-tab SW. * Safety-tab exists: Low, * Safety-tab does not exist: High)	In	In	In	In
82	POWER_KEY	I	Input terminal for signal from power button on the Front Panel. * Switch between ON and off, when down edge is detected.	In	In	In	In
83	CNR OFF(H)	O	CNR control for IC3001.	Low	Low	Low	Low
84	SECAM_ID(L)	I	Detection of SECAM mode.	In	In	In	In
85	DAVN	I	DAVN signal from Slicer	In	In	In	In
86	FG.AMP.OUT	I	Output from internal FG Amplifier	---	---	---	---
87	FG.AMP.IN	I	Input for internal FG Amplifier	---	---	---	---
88	GND(A)	-		---	---	---	---
89	AV3_S_IN(L)	I	Detection of conposite or conponent for AV3 VIDEO INPUT.	In	In	In	In
90	PFG	I	FPG input terminal.	---	---	---	---
91	OREF	O	Output from internal reference voltage (2.5V)	---	---	---	---
92	IREF	I	Input for internal reference voltage	---	---	---	---
93	SCAS_IN(L)	I	Detection between VHS tape or S-VHS tape.	In	In	In	In
94	CTL.HEAD(-)	I/O	Input signal from CTL HEAD(+)	---	---	---	---
95	CTL.HEAD(+)	I/O	Input signal from CTL HEAD(-)	---	---	---	---
96	CTL.AMP.REF	I	Input for internal CTL amplifier reference voltage	---	---	---	---
97	PB.CTL.OUT	O	Output from internal CLT amplifier	---	---	---	---
98	+5V(A)	-		---	---	---	---
99	+5V(AD)	-		---	---	---	---
100	EX.FF/REW(L)	O	Control terminal for the filter of the PB-CTL signal during FF/REW.	Low	Low	Low	Low

INPUT CONDITION								OUTPUT RESULT							
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 OUT	AV1 S(H)	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	VCR IN	VCR OUT
OFF	---	---	---	---	---	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
EXT LINK 1/2 Standby	---	---	---	L	NO.TU	L/M/H	---	MUTE	L	MUTE	*1[L(0)]	L	OFF(1)	TUN(000)	TUN
					C+.TU	L/M/H	---	MUTE	L	MUTE	*1[L(0)]	L	OFF(1)	TUN(000)	TUN
					AV1	L/M/H	---	MUTE	L	MUTE	*1[L(0)]	L	OFF(1)	AV1(100)	AV1
					AV2	L/M/H	---	MUTE	L	MUTE	*1[L(0)]	L	OFF(1)	AV2(010)	AV2
					AV3	L/M/H	---	MUTE	L	MUTE	*1[L(0)]	L	OFF(1)	AV3(110)	AV3
				H	no chance		---	---	---	---	---	---	---	---	---
VPS STAND BY	EXT	---	---	L	NO.TU	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
					C+.TU	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
					AV1	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV1(100)	AV1
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV1(100)	AV1
					AV2	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
					AV3	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV3(110)	AV3
				H	NO.TU	L	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	H	OFF(1)	TUN(000)	TUN
							S-VIDEO		H						
						M/H	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO		H						
					C+.TU	L	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	H	OFF(1)	TUN(000)	TUN
							S-VIDEO		H						
						M/H	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO		H						
					AV1	L	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	H	OFF(1)	AV1(100)	AV1
							S-VIDEO		H						
						M/H	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO		H						
					AV2	L	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	H	OFF(1)	AV2(010)	AV2
							S-VIDEO		H						
						M/H	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO		H						
					AV3	L	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	H	OFF(1)	AV3(110)	AV3
							S-VIDEO		H						
						M/H	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO		H						
	DECODER	---	---	L	NO.TU	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
					C+.TU	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
					AV1	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV1(100)	AV1
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
					AV2	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
					AV3	L	---	AV2 IN(0)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
						M/H	---	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV3(110)	AV3
				H	NO.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					AV1	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV2	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						

INPUT CONDITION								OUTPUT RESULT							
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 OUT	AV1 S(H)	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	EXT	TV	EE	L	NO.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	L(0)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	L(0)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
	or				AV1	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	L(0)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
					AV2	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	L(0)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
	"DECODER				AV3	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	L(0)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
	and			H	NO.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
	EXTLINK1/2				C+.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
	Standby				AV1	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
	is ON"				AV2	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
		VTR	EE	L	NO.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					AV1	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
					AV2	L	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	H	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	VCR OUT(11)	M/H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
				H	NO.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					AV1	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
					AV2	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
			VV	L	NO.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
					C+.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
					AV1	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	AV1(100)	PB
							S-VIDEO	Y OUT(11)	H						
					AV2	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	AV2(010)	PB
							S-VIDEO	Y OUT(11)	H						
					AV3	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	AV3(110)	PB
							S-VIDEO	Y OUT(11)	H						
				H	NO.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
					C+.TU	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
					AV1	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV1(100)	PB
							S-VIDEO	Y OUT(11)	H						
					AV2	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV2(010)	PB
							S-VIDEO	Y OUT(11)	H						
					AV3	---	VIDEO	VCR OUT(1)	L	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV3(110)	PB
							S-VIDEO	Y OUT(11)	H						

INPUT CONDITION								OUTPUT RESULT							
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 OUT	AV1 S(H)	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	DECODER	TV	EE	L	NO.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
							S-VIDEO	AV2 IN(0)	L						
					C+.TU	L	VIDEO	VCR OUT(1)	L	TUN IN(10)	L(0)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	TUN IN(10)	L(0)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV1	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
							S-VIDEO	AV2 IN(0)	L						
					AV2	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
							S-VIDEO	AV2 IN(0)	L						
					AV3	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	AV2 IN(0)	L	AV1 IN(00)	M/H(1)	L	*4	AV3(110)	AV3
							S-VIDEO	AV2 IN(0)	L						
				H	NO.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	L	VIDEO	VCR OUT(1)	L	TUN IN(10)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	TUN IN(10)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV1	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV2	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
		VTR	EE	L	NO.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	L	VIDEO	VCR OUT(1)	L	TUN IN(10)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	TUN IN(10)	M/H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV1	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV2	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						

INPUT CONDITION								OUTPUT RESULT							
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 OUT	AV1 S(H)	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	DECODER	VTR	EE	H	NO.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
					C+.TU	L	VIDEO	VCR OUT(1)	L	TUN IN(10)	H(1)	L	OFF(1)	TUN(000)	TUN
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	TUN IN(10)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV1	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV1(100)	AV1
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV2	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
							S-VIDEO	Y OUT(11)	H						
					AV3	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
							S-VIDEO	Y OUT(11)	H						
			VV	---	NO.TU	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
					C+.TU	L	VIDEO	VCR OUT(1)	L	TUN IN(10)	M/H(1)	L	OFF(1)	TUN(000)	PB
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	TUN IN(10)	M/H(1)	L	OFF(1)	AV2(010)	PB
							S-VIDEO	Y OUT(11)	H						
					AV1	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV1(100)	PB
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	PB
							S-VIDEO	Y OUT(11)	H						
					AV2	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	PB
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	PB
							S-VIDEO	Y OUT(11)	H						
					AV3	L	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV3(110)	PB
							S-VIDEO	Y OUT(11)	H						
						M/H	VIDEO	VCR OUT(1)	L	AV1 IN(00)	M/H(1)	L	OFF(1)	AV3(110)	PB
							S-VIDEO	Y OUT(11)	H						

INPUT CONDITION								Audio Output Results					IC4501 settings			Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 Out	AV2 Out	RF (C)	AV1 Out Selector	AV2 Out Selector	REC/ PB	Input Select	Dec Select	Mute (H)	A-Mute (H)
OFF	---	---	---	---	---	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
EXT LINK 1/2 Standby	---	---	---	L	NO.TU	L/M/H	---	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
					C+.TU	L/M/H	---	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
					AV1	L/M/H	---	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
					AV2	L/M/H	---	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
					AV3	L/M/H	---	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				H	no chance		---	---	---	---	---	---	---	---	---	---	---
VPS STAND BY	EXT	---	---	L	NO.TU	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					C+.TU	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					AV1	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					AV2	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					AV3	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				H	NO.TU	L	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
					C+.TU	L	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
					AV1	L	VIDEO	Mute	Mute	Mute	AV1IN	AV1IN	REC	EXT1	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	AV1IN	AV1IN	REC	EXT1	EXT1	H	H
							S-VIDEO										
					AV2	L	VIDEO	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
							S-VIDEO										
					AV3	L	VIDEO	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
							S-VIDEO										
	DECODER	---	---	L	NO.TU	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					C+.TU	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					AV1	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					AV2	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					AV3	L	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
						M/H	---	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				H	NO.TU	L	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
					C+.TU	L	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
							S-VIDEO										
					AV1	L	VIDEO	Mute	Mute	Mute	AV1IN	AV1IN	REC	EXT1	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
							S-VIDEO										
					AV2	L	VIDEO	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
							S-VIDEO										
					AV3	L	VIDEO	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
							S-VIDEO										
						M/H	VIDEO	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
							S-VIDEO										

INPUT CONDITION								Audio Output Results					IC4501 settings			Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 Out	AV2 Out	RF (C)	AV1 Out Selector	AV2 Out Selector	REC/ PB	Input Select	Dec Select	Mute (H)	A-Mute (H)
P.ON	EXT	TV	EE	L	NO.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
					C+.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
	or				AV1	---	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	INSEL	REC	EXT1	OUTSEL	L	L
							S-VIDEO										
					AV2	---	VIDEO	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
							S-VIDEO										
	"DECODER				AV3	---	VIDEO	AV3IN	AV3IN	AV3IN	AV3IN	INSEL	REC	EXT3	OUTSEL	L	L
							S-VIDEO										
	and			H	NO.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
	EXTLINK1/2				C+.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
	Standby				AV1	---	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	INSEL	REC	EXT1	OUTSEL	L	L
							S-VIDEO										
	is ON"				AV2	---	VIDEO	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
							S-VIDEO										
					AV3	---	VIDEO	AV3IN	AV3IN	AV3IN	AV3IN	INSEL	REC	EXT3	OUTSEL	L	L
							S-VIDEO										
		VTR	EE	L	NO.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
					C+.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
					AV1	---	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	INSEL	REC	EXT1	OUTSEL	L	L
							S-VIDEO										
					AV2	L	VIDEO	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
							S-VIDEO										
					AV3	---	VIDEO	AV3IN	AV3IN	AV3IN	AV3IN	INSEL	REC	EXT3	OUTSEL	L	L
							S-VIDEO										
				H	NO.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
					C+.TU	---	VIDEO	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
							S-VIDEO										
					AV1	---	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	INSEL	REC	EXT1	OUTSEL	L	L
							S-VIDEO										
					AV2	---	VIDEO	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
							S-VIDEO										
					AV3	---	VIDEO	AV3IN	AV3IN	AV3IN	AV3IN	INSEL	REC	EXT3	OUTSEL	L	L
							S-VIDEO										
			VV	L	NO.TU	---	VIDEO	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
							S-VIDEO										
					C+.TU	---	VIDEO	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
							S-VIDEO										
					AV1	---	VIDEO	PB	PB	PB	AV1IN	INSEL	PB	EXT1	OUTSEL	L	L
							S-VIDEO										
					AV2	---	VIDEO	PB	PB	PB	AV2IN	INSEL	PB	EXT2	OUTSEL	L	L
							S-VIDEO										
					AV3	---	VIDEO	PB	PB	PB	AV3IN	INSEL	PB	EXT3	OUTSEL	L	L
							S-VIDEO										
				H	NO.TU	---	VIDEO	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
							S-VIDEO										
					C+.TU	---	VIDEO	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
							S-VIDEO										
					AV1	---	VIDEO	PB	PB	PB	AV1IN	INSEL	PB	EXT1	OUTSEL	L	L
							S-VIDEO										
					AV2	---	VIDEO	PB	PB	PB	AV2IN	INSEL	PB	EXT2	OUTSEL	L	L
							S-VIDEO										
					AV3	---	VIDEO	PB	PB	PB	AV3IN	INSEL	PB	EXT3	OUTSEL	L	L
							S-VIDEO										

INPUT CONDITION								Audio Output Results					IC4501 settings			Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 Out	AV2 Out	RF (C)	AV1 Out Selector	AV2 Out Selector	REC/ PB	Input Select	Dec Select	Mute (H)	A-Mute (H)
P.ON	DECODER	TV	EE	L	NO.TU	L	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	TUN --> A2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					C+.TU	L	VIDEO	TUN	TUN	TUN	TUN	TUN	REC	TV	TVIN	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	TUN	AV2IN	AV2IN	TUN	REC	EXT2	TVIN	L	L
							S-VIDEO										
					AV1	L	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	AV1IN	REC	EXT1	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV2	L	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV3	L	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV3IN --> A2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
				H	NO.TU	L	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
					C+.TU	L	VIDEO	TUN	TUN	TUN	TUN	TUN	REC	TV	TVIN	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	TUN	AV2IN	AV2IN	TUN	REC	EXT2	TVIN	L	L
							S-VIDEO										
					AV1	L	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	AV1IN	REC	EXT1	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV2	L	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV3	L	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										
		VTR	EE	L	NO.TU	L	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
					C+.TU	L	VIDEO	TUN	TUN	TUN	TUN	TUN	REC	TV	TVIN	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	TUN	AV2IN	AV2IN	TUN	REC	EXT2	TVIN	L	L
							S-VIDEO										
					AV1	L	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	AV1IN	REC	EXT1	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV2	L	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV3	L	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										

INPUT CONDITION								Audio Output Results					IC4501 settings			Mute signals	
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV1 Out	AV2 Out	RF (C)	AV1 Out Selector	AV2 Out Selector	REC/ PB	Input Select	Dec Select	Mute (H)	A-Mute (H)
P.ON	DECODER	VTR	EE	H	NO.TU	L	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	TUN	AV1IN	TUN	TUN	AV1IN	REC	TV	EXT1	L	L
							S-VIDEO										
					C+.TU	L	VIDEO	TUN	TUN	TUN	TUN	TUN	REC	TV	TVIN	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	TUN	AV2IN	AV2IN	TUN	REC	EXT2	TVIN	L	L
							S-VIDEO										
					AV1	L	VIDEO	AV1IN	AV1IN	AV1IN	AV1IN	AV1IN	REC	EXT1	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV2	L	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
							S-VIDEO										
					AV3	L	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
							S-VIDEO										
			VV	---	NO.TU	L	VIDEO	PB	AV1IN	PB	TUN	AV1IN	PB	TV	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	PB	AV1IN	PB	TUN	AV1IN	PB	TV	EXT1	L	L
							S-VIDEO										
					C+.TU	L	VIDEO	PB	TUN	PB	TUN	TUN	PB	TV	TVIN	L	L
							S-VIDEO										
						M/H	VIDEO	PB	TUN	PB	AV2IN	TUN	PB	EXT2	TVIN	L	L
							S-VIDEO										
					AV1	L	VIDEO	PB	AV1IN	PB	AV1IN	AV1IN	PB	EXT1	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	PB	AV1IN	PB	AV2IN	AV1IN	PB	EXT2	EXT1	L	L
							S-VIDEO										
					AV2	L	VIDEO	PB	AV1IN	PB	AV2IN	AV1IN	PB	EXT2	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	PB	AV1IN	PB	AV2IN	AV1IN	PB	EXT2	EXT1	L	L
							S-VIDEO										
					AV3	L	VIDEO	PB	AV1IN	PB	AV3IN	AV1IN	PB	EXT3	EXT1	L	L
							S-VIDEO										
						M/H	VIDEO	PB	AV1IN	PB	AV3IN	AV1IN	PB	EXT3	EXT1	L	L
							S-VIDEO										

Remark:

NO.TU	Tuner position, DECODER OFF (e.g. ARD)
C+TU	Tuner position, DECODER ON (e.g. PREMI)
RGW SW	OFF = HIGH
RGW SW	ON = LOW
EE	Non-Playback signal
VV	Playback signal
INSEL	Inputselect= Audio Output signal from AN3655 at Line Out
***1[L(0)]**	**In case of EXT LINK1 standby(not EXT LINK2), AV1 PB must not output 'M' or 'H'**
***2[H*] / *3[M/H]**	**AV2 PB must not output 'M' or 'H' if AV2 PB IN is 'M' or 'H'.**
***4**	**RGB SW output "ON" if AV1PB is "H" or "M". (RGB SW output "OFF" if AV1PB is "L")**

INPUT CONDITION						OUTPUT RESULT						
POWER	AV2 SELECT	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	VCR IN	VCR OUT
OFF	---	---	---	---	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
EXT LINK 1/2 Standby	---	---	L	TUN	L/M/H	MUTE	MUTE	*1[L(0)]	L	OFF(1)	TUN(000)	TUN
				AV1	L/M/H	MUTE	MUTE	*1[L(0)]	L	OFF(1)	AV1(100)	AV1
				AV2	L/M/H	MUTE	MUTE	*1[L(0)]	L	OFF(1)	AV2(010)	AV2
				AV3	L/M/H	MUTE	MUTE	*1[L(0)]	L	OFF(1)	AV3(110)	AV3
			H	no chance		---	---	---	---	---	---	---
PDC STAND BY	EXT	---	L	TUN	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
				AV1	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	AV1(100)	AV1
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	AV1(100)	AV1
				AV2	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
				AV3	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	AV3(110)	AV3
			H	TUN	L	VCR OUT(1)	VCR OUT(11)	H(1)	H	OFF(1)	TUN(000)	TUN
					M/H	VCR OUT(1)	VCR OUT(11)	H(1)	L	OFF(1)	TUN(000)	TUN
				AV1	L	VCR OUT(1)	VCR OUT(11)	H(1)	H	OFF(1)	AV1(100)	AV1
					M/H	VCR OUT(1)	VCR OUT(11)	H(1)	L	OFF(1)	AV1(100)	AV1
				AV2	L	VCR OUT(1)	VCR OUT(11)	H(1)	H	OFF(1)	AV2(010)	AV2
					M/H	VCR OUT(1)	VCR OUT(11)	H(1)	L	OFF(1)	AV2(010)	AV2
				AV3	L	VCR OUT(1)	VCR OUT(11)	H(1)	H	OFF(1)	AV3(110)	AV3
					M/H	VCR OUT(1)	VCR OUT(11)	H(1)	L	OFF(1)	AV3(110)	AV3
	DECODER	---	L	TUN	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	TUN(000)	TUN
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	TUN(000)	TUN
				AV1	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	AV1(100)	AV1
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
				AV2	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	AV2(010)	AV2
				AV3	L	AV2 IN(0)	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
					M/H	AV2 IN(0)	AV1 IN(00)	M/H(1)	L	*4	AV3(110)	AV3
			H	TUN	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	TUN(000)	TUN
				AV1	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV1(100)	AV1
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
				AV2	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
				AV3	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3

INPUT CONDITION						OUTPUT RESULT						
POWER	AV2 SELECT	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	AV2 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	EXT	EE	L	TUN	---	VCR OUT(1)	VCR OUT(11)	L(0)	L	OFF(1)	TUN(000)	TUN
				AV1	---	VCR OUT(1)	VCR OUT(11)	L(0)	L	OFF(1)	AV1(100)	AV1
	or			AV2	---	VCR OUT(1)	VCR OUT(11)	L(0)	L	OFF(1)	AV2(010)	AV2
				AV3	---	VCR OUT(1)	VCR OUT(11)	L(0)	L	OFF(1)	AV3(110)	AV3
	"DECODER		H	TUN	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	TUN
	and			AV1	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV1(100)	AV1
	EXTLINK1/2			AV2	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV2(010)	AV2
	Standby			AV3	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV3(110)	AV3
	is ON"	VV	L	TUN	---	VCR OUT(1)	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	TUN(000)	PB
				AV1	---	VCR OUT(1)	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	AV1(100)	PB
				AV2	---	VCR OUT(1)	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	AV2(010)	PB
				AV3	---	VCR OUT(1)	VCR OUT(11)	M/H(1)	*3[M/H]	OFF(1)	AV3(110)	PB
			H	NO.TU	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	PB
				C+.TU	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	TUN(000)	PB
				AV1	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV1(100)	PB
				AV2	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV2(010)	PB
				AV3	---	VCR OUT(1)	VCR OUT(11)	H(1)	*2[H]	OFF(1)	AV3(110)	PB
	DECODER	EE	L	TUN	L	VCR OUT(1)	TUN IN(10)	L(0)	L	OFF(1)	TUN(000)	TUN
					M/H	VCR OUT(1)	TUN IN(10)	L(0)	L	OFF(1)	AV2(010)	AV2
				AV1	L	VCR OUT(1)	AV1 IN(00)	L(0)	L	OFF(1)	AV1(100)	AV1
					M/H	VCR OUT(1)	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
				AV2	L	VCR OUT(1)	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
					M/H	VCR OUT(1)	AV1 IN(00)	L(0)	L	OFF(1)	AV2(010)	AV2
				AV3	L	VCR OUT(1)	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
					M/H	VCR OUT(1)	AV1 IN(00)	L(0)	L	OFF(1)	AV3(110)	AV3
			H	TUN	L	VCR OUT(1)	TUN IN(10)	H(1)	L	OFF(1)	TUN(000)	TUN
					M/H	VCR OUT(1)	TUN IN(10)	H(1)	L	OFF(1)	AV2(010)	AV2
				AV1	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV1(100)	AV1
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
				AV2	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV2(010)	AV2
				AV3	L	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
					M/H	VCR OUT(1)	AV1 IN(00)	H(1)	L	OFF(1)	AV3(110)	AV3
		VV	---	TUN	L	VCR OUT(1)	TUN IN(10)	M/H(1)	L	OFF(1)	TUN(000)	PB
					M/H	VCR OUT(1)	TUN IN(10)	M/H(1)	L	OFF(1)	AV2(010)	PB
				AV1	L	VCR OUT(1)	AV1 IN(00)	M/H(1)	L	OFF(1)	AV1(100)	PB
					M/H	VCR OUT(1)	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	PB
				AV2	L	VCR OUT(1)	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	PB
					M/H	VCR OUT(1)	AV1 IN(00)	M/H(1)	L	OFF(1)	AV2(010)	PB
				AV3	L	VCR OUT(1)	AV1 IN(00)	M/H(1)	L	OFF(1)	AV3(110)	PB
					M/H	VCR OUT(1)	AV1 IN(00)	M/H(1)	L	OFF(1)	AV3(110)	PB

INPUT CONDITION						Audio Output Results					IC4501 settings			Mute signals	
POWER	AV2 SELECT	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 Out	AV2 Out	RF (C)	AV1 Out Selector	AV2 Out Selector	REC/ PB	Input Select	Dec Select	Mute (H)	A-Mute (H)
OFF	---	---	---	---	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
EXT LINK 1/2 Standby	---	---	L	TUN	L/M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				AV1	L/M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				AV2	L/M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				AV3	L/M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
			H	no chance		---	---	---	---	---	---	---	---	---	---
PDC STAND BY	EXT	---	L	TUN	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				AV1	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				AV2	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				AV3	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
			H	TUN	L	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
					M/H	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
				AV1	L	Mute	Mute	Mute	AV1IN	AV1IN	REC	EXT1	EXT1	H	H
					M/H	Mute	Mute	Mute	AV1IN	AV1IN	REC	EXT1	EXT1	H	H
				AV2	L	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
					M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				AV3	L	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
					M/H	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
	DECODER	---	L	TUN	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				AV1	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				AV2	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
				AV3	L	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
					M/H	AV2IN	AV1IN	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	L	H
			H	TUN	L	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
					M/H	Mute	Mute	Mute	TUN	AV1IN	REC	TV	EXT1	H	H
				AV1	L	Mute	Mute	Mute	AV1IN	AV1IN	REC	EXT1	EXT1	H	H
					M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				AV2	L	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
					M/H	Mute	Mute	Mute	AV2IN	AV1IN	REC	EXT2	EXT1	H	H
				AV3	L	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H
					M/H	Mute	Mute	Mute	AV3IN	AV1IN	REC	EXT3	EXT1	H	H

INPUT CONDITION						Audio Output Results					IC4501 settings			Mute signals	
POWER	AV2 SELECT	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 Out	AV2 Out	RF (C)	AV1 Out Selector	AV2 Out Selector	REC/ PB	Input Select	Dec Select	Mute (H)	A-Mute (H)
P.ON	EXT	EE	L	TUN	---	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
				AV1	---	AV1IN	AV1IN	AV1IN	AV1IN	INSEL	REC	EXT1	OUTSEL	L	L
	or			AV2	---	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
				AV3	---	AV3IN	AV3IN	AV3IN	AV3IN	INSEL	REC	EXT3	OUTSEL	L	L
	"DECODER		H	TUN	---	TUN	TUN	TUN	TUN	INSEL	REC	TV	OUTSEL	L	L
	and			AV1	---	AV1IN	AV1IN	AV1IN	AV1IN	INSEL	REC	EXT1	OUTSEL	L	L
	EXTLINK1/2			AV2	---	AV2IN	AV2IN	AV2IN	AV2IN	INSEL	REC	EXT2	OUTSEL	L	L
	Standby			AV3	---	AV3IN	AV3IN	AV3IN	AV3IN	INSEL	REC	EXT3	OUTSEL	L	L
	is ON"	VV	L	TUN	---	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
				AV1	---	PB	PB	PB	AV1IN	INSEL	PB	EXT1	OUTSEL	L	L
				AV2	---	PB	PB	PB	AV2IN	INSEL	PB	EXT2	OUTSEL	L	L
				AV3	---	PB	PB	PB	AV3IN	INSEL	PB	EXT3	OUTSEL	L	L
			H	NO.TU	---	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
				C+.TU	---	PB	PB	PB	TUN	INSEL	PB	TV	OUTSEL	L	L
				AV1	---	PB	PB	PB	AV1IN	INSEL	PB	EXT1	OUTSEL	L	L
				AV2	---	PB	PB	PB	AV2IN	INSEL	PB	EXT2	OUTSEL	L	L
				AV3	---	PB	PB	PB	AV3IN	INSEL	PB	EXT3	OUTSEL	L	L
	DECODER	EE	L	TUN	L	TUN	TUN	TUN	TUN	TUN	REC	TV	TVIN	L	L
					M/H	AV2IN	TUN	AV2IN	AV2IN	TUN	REC	EXT2	TVIN	L	L
				AV1	L	AV1IN	AV1IN	AV1IN	AV1IN	AV1IN	REC	EXT1	EXT1	L	L
					M/H	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
				AV2	L	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
					M/H	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
				AV3	L	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
					M/H	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
			H	TUN	L	TUN	TUN	TUN	TUN	TUN	REC	TV	TVIN	L	L
					M/H	AV2IN	TUN	AV2IN	AV2IN	TUN	REC	EXT2	TVIN	L	L
				AV1	L	AV1IN	AV1IN	AV1IN	AV1IN	AV1IN	REC	EXT1	EXT1	L	L
					M/H	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
				AV2	L	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
					M/H	AV2IN	AV1IN	AV2IN	AV2IN	AV1IN	REC	EXT2	EXT1	L	L
				AV3	L	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
					M/H	AV3IN	AV1IN	AV3IN	AV3IN	AV1IN	REC	EXT3	EXT1	L	L
		VV	---	TUN	L	PB	TUN --> mute	PB	TUN	TUN	PB	TV	TVIN	L	L
					M/H	PB	TUN --> mute	PB	AV2IN	TUN	PB	EXT2	TVIN	L	L
				AV1	L	PB	AV1IN	PB	AV1IN	AV1IN	PB	EXT1	EXT1	L	L
					M/H	PB	AV1IN	PB	AV2IN	AV1IN	PB	EXT2	EXT1	L	L
				AV2	L	PB	AV1IN	PB	AV2IN	AV1IN	PB	EXT2	EXT1	L	L
					M/H	PB	AV1IN	PB	AV2IN	AV1IN	PB	EXT2	EXT1	L	L
				AV3	L	PB	AV1IN	PB	AV3IN	AV1IN	PB	EXT3	EXT1	L	L
					M/H	PB	AV1IN	PB	AV3IN	AV1IN	PB	EXT3	EXT1	L	L

***1[L(0)]** **In case of EXT LINK1 standby(not EXT LINK2), AV1 PB must not output 'M' or 'H'**
***2[H*] / *3[M/H]** **AV2 PB must not output 'M' or 'H' if AV2 PB IN is 'M' or 'H'.**
***4** **RGB SW output "ON" if AV1PB is "H" or "M". (RGB SW output "OFF" if AV1PB is "L")**

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

Ref. No.	IC1501								IC1502											
MODE	1	2	3	4					1	2	3	4								
STOP	1.2	2.3	0.1	0.0					0.0	1.2	5.0	0.0								
PLAY	1.2	2.3	4.3	0.0					0.0	1.2	5.0	0.0								
REC	1.2	2.3	4.3	0.0					0.0	1.2	5.0	0.0								
F.F	1.2	2.3	1.2	0.0					0.0	1.2	2.3	0.0								
REW	1.2	2.3	2.2	0.0					0.0	1.2	2.3	0.0								

Ref. No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	15.4	15.4	15.6	1.0	5.1	1.1	1.2	0.5	2.4	1.4	-0.1	3.9	3.9	3.9	0.0	15.4				
PLAY	15.0	15.0	15.2	1.0	5.1	1.1	1.2	0.5	2.5	1.4	0.0	3.9	3.9	3.9	0.0	15.0				
REC	15.1	15.0	15.3	1.0	5.1	1.1	1.2	0.5	2.4	1.4	-0.1	3.9	3.9	3.9	0.0	15.0				
F.F	14.7	14.6	14.9	1.1	5.1	1.1	1.2	0.5	2.5	1.4	0.0	3.9	3.9	3.9	0.0	15.0				
REW	14.6	14.6	14.9	1.1	5.1	1.1	1.2	0.5	2.5	1.4	0.0	3.9	3.9	3.9	0.0	14.8				

Ref. No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.8	4.2	4.8	0.0	0.0	5.1	5.0	5.0	3.3	0.0	0.0	1.4	0.0	5.2	4.8	0.0	4.8	2.4	0.0	0.0
PLAY	4.8	4.2	4.8	0.0	0.0	5.0	5.0	4.5	1.4	4.5	4.8	1.4	0.0	5.2	0.0	0.0	4.9	2.4	2.4	0.0
REC	4.8	4.2	4.8	0.0	0.0	5.0	5.0	4.5	3.3	0.0	4.7	1.4	0.0	5.2	4.8	0.0	4.8	2.4	0.0	0.0
F.F	0.0	4.2	4.8	0.0	0.0	5.1	4.9	4.5	3.4	0.0	5.0	1.4	0.0	5.2	4.8	0.0	4.8	2.4	0.0	0.0
REW	4.8	4.2	4.8	0.0	0.0	5.1	4.9	4.5	3.4	0.0	5.0	1.4	0.0	5.2	4.8	0.0	4.8	2.4	0.0	0.0

Ref. No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.8	0.0	0.0	4.9	1.4	1.5	4.9	2.1	2.0	0.0
PLAY	0.0	0.0	4.2	4.9	0.0	0.0	0.0	0.0	0.0	4.3	4.9	0.0	0.0	4.9	1.4	1.5	4.9	2.1	2.0	0.0
REC	0.0	0.0	4.2	0.0	4.8	4.8	4.8	0.0	0.0	0.0	4.8	0.0	0.0	4.9	1.4	1.5	4.9	2.1	2.0	0.0
F.F	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8	0.0	4.9	1.4	1.5	4.9	2.1	2.0	0.0
REW	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8	0.0	4.9	1.4	1.6	4.9	2.1	2.0	0.0

Ref. No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	4.8	0.0	4.8	0.0	0.0	0.0	1.7	2.1	0.0	1.6	2.5	1.6	5.0	2.1	0.0	1.9	0.0	4.8	0.0	0.0
PLAY	4.8	0.0	4.9	0.0	0.0	0.0	1.7	2.1	0.0	1.6	2.5	1.6	5.0	2.1	0.0	1.9	0.0	4.8	0.0	0.0
REC	4.8	0.0	4.8	0.0	0.0	0.0	1.7	2.1	0.0	1.6	2.5	1.6	5.0	2.1	0.0	1.9	0.0	4.8	0.0	0.0
F.F	4.8	0.0	4.8	0.0	0.0	0.0	1.7	2.1	0.0	1.6	2.5	1.6	5.0	2.1	0.0	1.9	0.0	4.8	0.0	0.1
REW	4.8	0.0	4.9	0.0	0.0	0.0	1.7	2.1	0.0	1.6	2.5	1.6	5.0	2.1	0.0	1.9	0.0	4.8	0.0	0.1

Ref. No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	4.8	0.0	0.0	2.4	0.0	0.0	0.0	4.7	4.7	4.8	2.9	2.8	0.0	0.0	0.0	0.0	2.4	5.2	0.1	5.0
PLAY	4.8	0.0	0.0	2.4	0.0	0.0	0.0	4.7	4.7	4.8	2.9	2.8	0.0	0.0	0.4	2.5	2.4	5.2	5.0	4.1
REC	4.8	0.0	0.0	2.4	0.0	0.0	0.0	4.7	4.7	4.8	2.9	2.8	0.0	0.0	0.4	2.5	2.4	5.2	5.0	4.3
F.F	4.8	0.0	0.0	2.4	0.0	0.0	0.0	4.6	4.6	4.8	2.9	2.8	0.0	0.0	0.4	4.8	2.5	5.2	2.4	2.2
REW	4.8	0.0	0.0	2.4	0.0	0.0	0.0	4.6	4.6	4.8	2.9	2.8	0.0	4.8	4.5	2.6	2.5	5.2	2.2	2.4

Ref. No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	0.0	4.9	0.0	0.0	5.0	2.5	2.5	-0.1	5.0	1.0	2.5	2.5	0.0	2.4	2.4	2.5	2.5	5.1	5.1	0.0
PLAY	0.0	4.9	0.0	0.0	5.0	2.5	2.5	-0.1	5.0	1.1	2.5	2.5	0.0	2.4	2.4	2.5	2.5	5.1	5.1	0.0
REC	0.0	4.9	0.0	0.0	5.0	2.5	2.5	-0.1	5.0	1.0	2.5	2.5	0.0	2.2	2.4	2.7	2.5	5.0	5.0	0.0
F.F	0.0	4.9	0.0	0.0	5.0	2.5	2.5	-0.1	5.0	1.1	2.5	2.5	0.0	2.4	2.4	2.5	2.6	0.0	5.1	1.8
REW	0.0	4.9	0.0	0.0	5.0	2.5	2.5	-0.1	5.0	1.1	2.5	2.5	0.0	2.5	2.5	2.5	2.6	5.1	5.1	1.7

Ref. No.	IC6002																			
MODE	1	2	3	4	5	6	7	8												
STOP	0.0	0.0	0.0	0.0	2.8	2.9	4.9	5.0												
PLAY	0.0	0.0	0.0	0.0	2.8	2.9	4.9	5.1												
REC	0.0	0.0	0.0	0.0	2.8	2.9	4.8	5.0												
F.F	0.0	0.0	0.0	0.0	2.8	2.9	4.8	5.1												
REW	0.0	0.0	0.0	0.0	2.8	2.9	4.8	5.1												

Ref. No.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.0	0.0	-	2.9	2.8	0.0	0.4	-	5.0	0.0	0.0	2.5	-	2.6	2.5	1.5	1.3	-	5.0	5.0
PLAY	0.0	0.0	-	2.9	2.8	0.0	0.4	-	5.0	5.0	0.0	2.6	-	2.6	2.6	1.5	1.3	-	5.0	5.0
REC	0.0	0.0	-	2.9	2.8	0.0	0.4	-	5.0	0.0	0.0	2.5	-	2.5	2.5	1.5	1.3	-	5.0	5.0
F.F	0.0	0.0	-	2.9	2.8	0.0	0.4	-	5.0	0.0	0.0	2.5	-	2.6	2.5	1.5	1.3	-	5.0	5.0
REW	0.0	0.0	-	2.9	2.8	0.0	0.4	-	5.0	0.0	0.0	2.5	-	2.6	2.5	1.5	1.3	-	5.0	5.0

SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART (SP MODE)

Ref. No.	Q1501			Q1502			Q6004			Q6008			Q6009		
MODE	(–)	(+)		(–)	(+)		E	C	B	E	C	B	E	C	B
STOP	-0.1	4.5		0.0	5.0		1.4	0.0	0.8	-0.1	12.4	0.0	1.6	5.0	2.3
PLAY	-0.1	4.6		0.0	5.0		1.2	0.0	0.8	11.8	12.4	12.3	1.6	5.0	2.3
REC	-0.1	4.6		0.0	5.0		1.4	0.0	0.8	-0.1	12.4	0.0	1.6	5.0	0.0
F.F	-0.1	4.6		0.0	5.0		1.4	0.0	0.8	-0.1	12.4	0.0	1.6	5.0	2.3
REW	-0.1	4.7		0.0	4.9		1.4	0.0	0.8	-0.1	12.4	0.0	1.6	5.0	2.3

Ref. No.	Q6010			QR6001			QR6004		
MODE	E	C	B	E	C	B	E	C	B
STOP	2.3	0.0	1.6	0.0	0.0	4.8	-0.1	0.0	4.8
PLAY	2.3	0.0	1.6	0.0	12.3	0.0	-0.1	0.0	4.8
REC	2.3	0.0	1.6	0.0	0.0	4.8	-0.1	0.0	4.8
F.F	2.3	0.0	1.6	0.0	0.0	4.8	-0.1	0.0	4.8
REW	2.3	0.0	1.6	0.0	0.0	4.8	-0.1	0.0	4.8

443NT [L]	4.43 NTSC Ⓛ
A. COMP	AUDIO COMPONENT SIGNAL
A. COMPO	AUDIO COMPONENT SIGNAL
A. D.P [L]	AUDIO DUBBING PAUSE Ⓛ
A. D/L [L]	AUDIO DUBBING PAUSE Ⓛ
A. DEF [S]	AUDIO DEFEAT
A. DEF [S] [L]	AUDIO DEFEAT
A. DUB P [L]	AUDIO DUBBING PAUSE Ⓛ
A. DUB [H]	AUDIO DUBBING Ⓗ
A. ERASE	AUDIO ERASE
A. H. SW	AUDIO HEAD SWITCHING PULSE
A. HEAD [R]	AUDIO HEAD (REC)
A. HEAD [W]	AUDIO HEAD (PLAY)
A. IN [L]	AUDIO INPUT (L)
A. IN [R]	AUDIO INPUT (R)
A. MUT [H]	AUDIO MUTE Ⓗ
A. MUTE [H]	AUDIO MUTE Ⓗ
A. OUT [L]	AUDIO OUTPUT (L)
A. OUT [R]	AUDIO OUTPUT (R)
A. RF OUT	AUDIO RF SIGNAL OUTPUT
A/VS/S. DATA	AV SW/SERIAL DATA
AC ONLINE	AC ONLINE
AC. O/EE. H	AC ONLINE/EE Ⓗ
AFC S C	AFC S CURVE
AFC [S]	AFC S CURVE
AFC. DEF	AFC DEFEAT
ARFC OUT	AUDIO RF SIGNAL OUTPUT
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL Ⓗ/NORMAL
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE
AUDIO IN [L]	AUDIO INPUT (L)
AUDIO IN [R]	AUDIO INPUT (R)
AUDIO OUT [L]	AUDIO OUTPUT (L)
AUDIO OUT [R]	AUDIO OUTPUT (R)
AUDIO SELECT [H]	AUDIO SELECT Ⓗ
AUDIO. L	AUDIO (L)
AUDIO. R	AUDIO (R)
AV CNT	AV CONTROL
AV CTL	AV CONTROL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK
AV. C.M.	AV CONTROL MODE
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)
AVSW/METER. L	AV SW/LEVEL METER (L)
B MODE. H	B MODE Ⓗ
B.G.P	BURST GATE PULSE
BACKUP 5V	BACK UP 5V
BAND. U.E.	BAND U
BANDVL. D	BAND VL
BI/MI [L]	BILINGUAL/MIX Ⓛ
BIL	BILINGUAL
BIL [L]	BILINGUAL Ⓛ
BIL. [H]	BILINGUAL Ⓗ
BIL/M1 [L]	BILINGUAL Ⓛ
BS CLOCK	BS CLOCK
BS DATA	BS DATA
BS LCH IN	BS L CHANNEL INPUT
BS MIX [H]	BS MIX Ⓗ
BS MON [H]	BS MONITOR Ⓗ
BS MONI [H]	BS MONITOR Ⓗ
BS RCH IN	BS R CHANNEL INPUT
BS VIDEO	BS VIDEO SIGNAL
BS VIDEO/BS1	BS VIDEO SIGNAL
BS [H]	BS Ⓗ
BS. LEVEL	BS LEVEL
BS. M [H]	BS MONITOR Ⓗ
BS/VTR [H]	BS/VTR Ⓗ
BUS CLK	BUS CLOCK
BUS LSN	BUS LISTEN
BUS TLK	BUS TALK
BUZZER	BUZZER
CAP EC	CAPSTAN TORQUE CONTROL
CAP M GND	CAPSTAN MOTOR GND
CAP. ET	CAPSTAN TORQUE CONTROL
CAP. FG1	CAPSTAN FG1 PULSE
CAP. FG2	CAPSTAN FG2 PULSE
CAS. SW	CASSETTE SW
CCN	PLAYBACK CONTROL SIGNAL (–)
CCP	PLAYBACK CONTROL SIGNAL (+)
CHM	CONTROL SIGNAL (+)
CHP	CONTROL SIGNAL (–)
CINEM [L]	CINEMA Ⓛ
CINEMA [L]	CINEMA Ⓛ
CINEMA/MIX	CINEMA/MIX
CKL	RATCH LOCK
CKS	SHIFT LOCK
CL	CLOCK
CLK	CLOCK
CLK (C.G)	CLOCK
CLOCK. IN	CLOCK INPUT
CLP	CLAMP
COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
COLOR [H]	COLOUR Ⓗ
CONV	CONVERTOR
CS	CHIP SELECT
CTL GND	CONTROL GND
CTL HEAD [+]	CONTROL HEAD (+)
CTL HEAD [–]	CONTROL HEAD (–)
CTL [+]	CONTROL HEAD (+)
CTL [–]	CONTROL HEAD (–)
CUE BIAS	CUE BIAS
CURRENT LIM	CURRENT LIMMITER
CYL ET	CYLINDER TORQUE CONTROL

CYL GND	CYLINDER GND
D.F.M. REC [H]	DELAIED FM RECORDING Ⓗ
D. FM REC [L]	DELAIED FM RECORDING Ⓛ
D. GND	DIGITAL GND
D. REC [H]	DELAYED RECORDING Ⓗ
D4/S. LED	D4/STILL LED
D4/STILLED	D4/STILL LED
DAC [CLK]	TUNER DAC (CLOCK)
DAC/FSCS	TUNER DAC/FS CHIP SELECT
DAREC [H]	DELAYED AUDIO RECORDING Ⓗ
DATA	DATA
DECODER [L]	DECODER (L)
DECODER [R]	DECODER (R)
DEW	DEW
DEW SNS	DEW SENSOR
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓗ
E. REC 5V	EXCEPT RECORDING 5V
EC	ERROR TORQUE CONTROL
ECR	ERROR TORQUE CONTROL REFERENCE VOLTAGE
EDT TRIG [L]	EDIT TRIGGER Ⓛ
EDIT [H]	EDIT Ⓗ
EE [H]	EE Ⓗ
EE [H]/INS [M]	EE Ⓗ/INSERT Ⓜ
EE. VV. TR	EE/VV/TRICK PLAY
EJECT. PO	EJECT POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK
ENV. SEL	ENVELOPE SELECT
ENVE. OUT	ENVELOPE OUTPUT
ENVE. SEL	ENVELOPE SELECT
ENV SELECT	ENVELOPE SELECT
EP [H]	LP Ⓗ
EP/LP [H]	LP Ⓗ
EP/LP/SP	LP/SP
EP/SS [H]	LP/SLOW/STILL/STOP Ⓗ
EPROMCS	EPROM CHIP SELECT
EX. REC 5V	EXCEPT RECORDING 5V
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ
FG1 IN	FG1 PULSE INPUT
FG2 IN	FG2 PULSE INPUT
FILTER ADJUSTMENT	FILTER ADJUSTMENT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓗ
FLY ON [H]	FLYING ERASE HEAD ON Ⓗ
FLY. E [H]	FLYING ERASE HEAD ON Ⓗ
FM MUT [H]	FM AUDIO MUTE Ⓗ
FM MUTE [H]	FM AUDIO MUTE Ⓗ
FM OUT [L]	FM OUTPUT (L)
FM OUT [R]	FM OUTPUT (R)
FM PACK OUT [L]	FM PACK OUTPUT (L)
FM PACK OUT [R]	FM PACK OUTPUT (R)
FM/BS SEL [L]	FM/BS SELECT (L)
FM/BS SEL [R]	FM/BS SELECT (R)
FS. CLK	FS CLOCK
FUL. E [H]	FULL ERASE HEAD ON Ⓗ
FULL. E [H]	FULL ERASE HEAD ON Ⓗ

FULL. E. 12V	FULL ERASE 12V
GND [A]	GND (ANALOG)
GND [TU]	GND (TUNER)
GND/N. SW. 12V	GND/NON SW 12V
H. SYNC	HORIZONTAL SYNC
H. AMP. SW	HEAD AMP SW PULSE
H. P <R>	HEAD PHONE (R)
H. P <L>	HEAD PHONE (L)
H. P GND	HEAD PHONE GND
H. P OUT [L]	HEAD PHONE OUTPUT (L)
H. P OUT [R]	HEAD PHONE OUTPUT (R)
H. SW	HEAD SW PULSE
HEAD PHONE [L]	HEAD PHONE (L)
HEAD PHONE [R]	HEAD PHONE (R)
HEAD SW	HEAD SW
HEATER [+]	HEATER (+)
HEATER [–]	HEATER (–)
HSS	HORIZONTAL SYNC SIGNAL
HTR [+]	HEATER (+)
HTR [–]	HEATER (–)
I RFE	REFERENCE CURRENT
ICL	CONTROL AGC CIRCUIT
IF	INTERMEDIATE FREQUENCY
IN SELA1	INPUT SELECT A1 POSITION
IN SELA2	INPUT SELECT A2 POSITION
IN SELA3	INPUT SELECT A3 POSITION
INS L/R [L]	INSERT Lch/Rch Ⓛ
INS. [H]	INSERT Ⓗ
INSEL A1	INPUT SELECT A1 POSITION
INSEL A2	INPUT SELECT A2 POSITION
INSERT	INSERT
INSERT [H]	INSERT Ⓗ
IO CS	INPUT/OUTPUT CHIP SELECT
JOG1	JOG1
JOG S3 LED/FOWRD	JOG LED/FORWARD LED
JOG/F. LED	JOG LED/FORWARD LED
JSB [H]	JSB Ⓗ
JST. CLCK	JUST CLOCK
JST. CLK	JUST CLOCK
JST. CLOCK	JUST CLOCK
L. OUT	Lch OUTPUT
L. CH [H]	Lch Ⓗ
L. CH [L]	Lch Ⓛ
LED (MAIN)	LED (MAIN)
LED (STEREO)	LED (STEREO)
LED (SUB)	LED (SUB)
LED CKL	LED SERIAL CLOCK
LED CKS	LED SERIAL CLOCK
LED DATA	LED SERIAL DATA
LINE IN 1 [L]	LINE INPUT 1 (L)
LINE IN 1 [R]	LINE INPUT 1 (R)
LINE IN 2 [L]	LINE INPUT 2 (L)
LINE IN 2 [R]	LINE INPUT 2 (R)
LINE IN V	LINE INPUT VIDEO
LINE IN [L]	LINE INPUT (L)

LINE IN [R]	LINE INPUT (R)
LINE OUT [L]	LINE OUTPUT (L)
LINE OUT [R]	LINE OUTPUT (R)
LP [H]	LP Ⓗ
LPTRI [L]	LP TRICK PLAY Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING
M GND	MOTOR GND
M REG	MOTOR REGULATOR
MAIN OUT	MAIN OUTPUT
MAIN [L]	MAIN Ⓛ
MAIN/MONO	MAIN/MONAURAL
MAX IN	MAXIMAM INPUT
MES [H]	MESECAM Ⓗ
MESE [H]	MESECAM Ⓗ
MESE [L]	MESECAM Ⓛ
METER 5V	LEVEL METER 5V
METER [L]	LEVEL METER (L)
METER [R]	LEVEL METER (R)
METER. L/AVS	LEVEL METER (L)
METER. R/AVC	LEVEL METER (R)
MI/BI [L]	MIX Ⓗ/BILIGUAL
MIC GND	MIC GND
MIC IN	MIC INPUT
MIC IN [L]	MIC INPUT (L)
MIC IN [R]	MIC INPUT (R)
MIC [H]	MIC Ⓗ
MIX [H]	MIX Ⓗ
MIX [H]/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINE	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MN. H/M. L	MONAURAL Ⓗ/MAIN Ⓛ
MN. H/MAI. L	MONAURAL Ⓗ/MAIN Ⓛ
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ
MODE SEL	AUDIO MODE SELECT
MODE SW	AUDIO MODE SW
MODE. S. IN	AUDIO MODE SELECT INPUT
MODE. S. OUT	AUDIO MODE SELECT OUTPUT
MONO [H]	MONAURAL Ⓗ
MONO [H]/MAIN [L]	MONAURAL Ⓗ/MAIN Ⓛ
MONO2 [L]	MONAURAL 2
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)
MOTOR GND	MOTOR GND
MUTE	MUTE
N. A. REC [L]	NORMAL AUDIO RECORDING
N. SW 12V	NON SW 12V
N. SW. 5. DET	NON SW 5V DETECT
NICAM	NICAM
NICAM [L]	NICAM Ⓛ
NOL [H]	PAL Ⓗ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓗ
NORMAL [H]	NORMAL Ⓗ
NR BIAS	NR BIAS
NTSC [L]	NTSC Ⓛ
OCH	CONTROL AGC CIRCUIT
OUT	OUTPUT

P-OFF [H]	POWER OFF Ⓗ
P-OFF [L]	POWER OFF Ⓛ
P. FAIL	POWER FAILURE DETECT
P. OFF [H]	POWER OFF Ⓗ
P. OFF [L]	POWER OFF Ⓛ
PAL [H]	PAL Ⓗ
PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓗ
PB ADJ OUT	PLAYBACK ADJUST OUTPUT
PB OUT	PLAYBACK OUTPUT
PB. H	PLAYBACK Ⓗ
PFG	PG/FG
PHOTSN +B	PHOTO SENSOR +B
PICT. CNT	PICTURE CONTROL
PLAY LED/RVS LED	PLAY LED/REVERSE LED
PLAY. PO	PLAY POSITION
PLAY/R. LED	PLAY LED/REVERSE LED
PLY/DEW	PLAY/DEW Ⓗ
POWER OFF [L]	POWER OFF Ⓛ
PREROLL [H]	PREROLL Ⓗ
PWRFAIL	POWER FAILURE DETECT
R. CH [H]	Rch Ⓗ
R. CH [L]	Rch Ⓛ
R. ST	RESET
R/S/F	REVERSE Ⓗ/STOP Ⓜ/FORWARD Ⓛ
RCH [H]	Rch Ⓗ
REC 12V	RECORDING 12V
REC CHROMA	RECORDING CHROMINANCE SIGNAL
REC H	RECORDING Ⓗ
REC IN	RECORDING INPUT
REC OUT [L]	RECORDING OUTPUT Ⓛ
REC START	RECORDING START
REC VR [C]	RECORDING VOLUME (COMMON)
REC VR [L]	RECORDING VOLUME (L)
REC VR [R]	RECORDING VOLUME (R)
REC Y	RECORDING LUMINANCE SIGNAL
REC [H]	RECORDING Ⓗ
REC. C	RECORDING CHROMINANCE SIGNAL
REC. Y	RECORDING LUMINANCE SIGNAL
REC/EE CTL	RECORDING/EE CONTROL
REEL-T	REEL PULSE (TAKE-UP)
REEL-S	REEL PULSE (SUPPLY)
REGULATOR FILTER	REGULATOR FILTER
RESET	RESET
REV M F/R	REVIEW MOTOR FORWARD/REVERSE
REV M V1	REVIEW MOTOR V1
REV M V2	REVIEW MOTOR V2
REV MOTOR F/R	REVIEW MOTOR FORWARD/REVERSE
REV MOTOR V1	REVIEW MOTOR V1
REV MOTOR V2	REVIEW MOTOR V2
REV MOTOR [+]	REVIEW MOTOR (+)
REV MOTOR [–]	REVIEW MOTOR (+)
REV. M. GND	REVIEW MOTOR GND
RF. CHROMA	RF CHROMINANCE SIGNAL

RF OUT	RF OUTPUT
RF Y	RF LUMINANCE SIGNAL
RF. Y. IN	RF LUMINANCE SIGNAL INPUT
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT
ROTAR. SW	ROTARY SW
ROTARY	ROTARY SW
RST	RESET
RST [L]	RESET Ⓛ
Rch/INST	Rch/INSERT
S IN	SERIAL DATA INPUT
S OUT	SERIAL DATA OUTPUT
S-PHOTO	SUPPLY PHOTO TRANSISTOR
S-RL. PLS	SUPPLY REEL PULSE
S. CLK	SERIAL CLOCK
S. CLK/AV	SERIAL CLOCK/AV
S. DATA	SERIAL DATA
S. DATA/A	SERIAL DATA
S. PHOTO	SUPPLY PHOTO TRANSISTOR
S. TAB [L]	SAFETY TAB SW ON Ⓛ
S/P/N	SECAM/PAL/NTSC
SC IN	SERIAL CLOCK INPUT
SC OUT	SERIAL CLOCK OUTPUT
SCK SELECT	SERIAL CLOCK SELECT
SEL OUT [L]	SELECT OUTPUT (L)
SEL OUT [R]	SELECT OUTPUT (R)
SHUTTLE 1	SHUTTLE 1
SIF	SOUND INTERMEDIATE FREQUENCY
SLMUT [H]	INPUT SELECT MUTE Ⓗ
SLNID [+]	SOLENOID (+)
SLNID [–]	SOLENOID (–)
SLW TR. MM	SLOW TRACKING MONO MULTI
SLW TR. REF	SLOW TRACKING REFERENCE VOLTAGE
SNS. GND	SENSOR GND
SOFT [H]	SOFT TAPE PLAY Ⓗ
SOFT [H]/NORMAL	SOFT TAPE PLAY Ⓗ/NORMAL Ⓗ
SOLENOID ON [L]	SOLENOID ON Ⓛ
SP [H]	SP Ⓗ
SP/L/SLP	SP/LP
SSS [L]	SLOW/STILL/STOP
STEREO LED	STEREO LED
STEREO [H]	STEREO Ⓗ
STEREO [L]	STEREO Ⓛ
STOP. PO	STOP POSITION
STOP/5V	STOP POSITION/5V
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT
STOP1/PAL:ST	STOP1 POSITION/PAL
STOP2. PO	STOP 2 POSITION
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW
STREO [H]	STEREO Ⓗ
SUB BIAS	SUB BIAS
SUB. SW	SUB SW
SVHS CAS [L]	S-VHS CASSETTE Ⓛ
SW. 5. DET	SW 5V DETECT
SYNC [L]	SYNC Ⓛ
SYSCON 5V	SYSTEM CONTROL 5V
SYSTEM	SYSTEM SW
T-PHOTO	TAKE-UP PHOTO TRANSISTOR
T-RL. PLS	TAKE-UP REEL PULSE
T. BUSCLK	TIMER BUS CLOCK
T. BUSLSN	TIMER BUS LISTEN
T. BUSTLK	TIMER BUS TALK
T. END [L]	TAPE END Ⓛ
T. PHOTO	TAKE-UP PHOTO TRANSISTOR
TAPE END [L]	TAPE END Ⓛ
TAPE END [L]/CAM	TAPE END Ⓛ/CAMERA PAUSE
TEST	TEST MODE
TPZ	TRAPEZOIDAL WAVE CIRCUIT
TRIC [L]	TRIC PLAY Ⓛ
TRICK [L]	TRIC PLAY Ⓛ
TRK. ENV	AUTO TRACKING ENVELOPE DETECT
TU. AUDIO	TUNER AUDIO
TU. GND	TUNER GND
TU. V. IN	TUNER VIDEO SIGNAL INPUT
TU. VIDEO	TUNER VIDEO
TUN NOR IN	TUNER NORMAL INPUT
TUN R	TUNER AUDIO (R)
TUN. AUDIO IN	TUNER AUDIO INPUT
TUNER 12V	TUNER 12V
TUNER L	TUNER AUDIO (L)
TUNER V IN	TUNER VIDEO SIGNAL INPUT
TUNER [L]	TUNER AUDIO (L)
TUNER [N]	TUNER AUDIO (NORMAL)
TUNER [R]	TUNER AUDIO (R)
TUNER. 12	TUNER 12V
TUOFF [H]	TUNER OFF Ⓗ
TV. AUDIO	TV AUDIO
TV/VTR	TV/VTR
TXTON [L]	TEXT ON Ⓛ
U. REG45V	UNREGULATOR 45V
UNREG	UNREGULATOR
UNREG19V	UNREGULATOR 19V
V. REF	REFERENCE VOLTAGE
V. EE [H]	VIDEO EE Ⓗ
V. EE [L]	VIDEO EE Ⓛ
VCO REF	REFERENCE OSCILLATER
VD. IN	VIDEO SIGNAL INPUT
VD. OUT	VIDEO SIGNAL OUTPUT
VIDEO EE [L]	VIDEO EE Ⓛ
VIDEO IN	VIDEO SIGNAL INPUT
VIDEO OUT	VIDEO SIGNAL OUTPUT
VM	MOTOR VOLTAGE
VM DOWN [L]	MOTOR VOLTAGE DOWN Ⓛ
VSS	VERTICAL SYNC SIGNAL
VTR [H]	VTR Ⓗ
VTR. 12V	VTR 12V
X IN	OSCILLATOR INPUT
X OUT	OSCILLATOR OUTPUT

For your safety please read the following text carefully

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstance should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

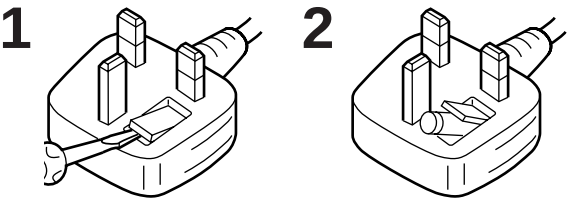
How to replace the Fuse

- There are two types of the AC Mains Lead assembly: **A** and **B** as shown below.

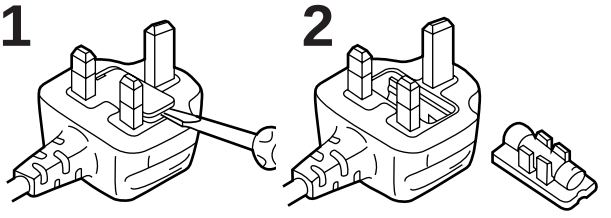
1 Open the fuse compartment with a screwdriver.

2 Replace the fuse and fuse cover.

TYPE A



TYPE B



T1150-3 STOP
1.6Vp-p (5msec.div.)

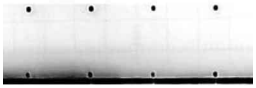
T1150-5 STOP
330Vp-p (5usec.div.)

T1150-6 STOP
340Vp-p (5usec.div.)

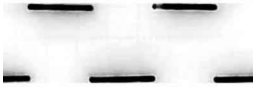
T1150-7 STOP
18Vp-p (10usec.div.)

Q1150-G STOP
15Vp-p (5usec.div.)

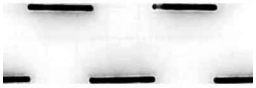
Q1200-1,2 STOP
0.5Vp-p (5usec.div.)



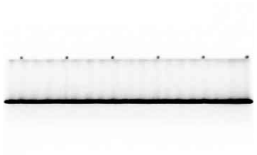
IC6001-13 PAUSE
5.0Vp-p (10msec.div.)



IC6001-18 REC
5.0Vp-p (10msec.div.)

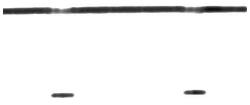


IC6001-19 REC
5.0Vp-p (10msec.div.)

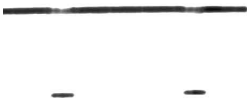


IC6001-48 REC
5.0Vp-p (10msec.div.)

IC6001-52 REC
2.1Vp-p (20µsec.div.)

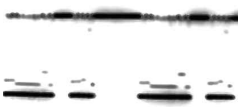


IC6001-68,69 REC
5.0Vp-p (10msec.div.)



IC6001-70 REC
5.0Vp-p (10msec.div.)

IC6001-71 REC
5.0Vp-p (10msec.div.)



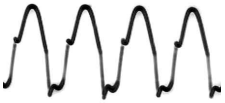
IC6001-72 REC
5.0Vp-p (10msec.div.)

IC6001-79,80 FF/REW
5.0Vp-p (1msec.div.)

IC6001-90 REC
5.0Vp-p (10msec.div.)

IC6001-94,95 REC
6.0Vp-p (10msec.div.)

IC6001-97 PLAY
0.6Vp-p (10msec.div.)



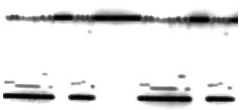
IC2501-1,2,16 REC
9.5Vp-p (5msec.div.)

IC3001-6 REC/PLAY
1.8Vp-p (0.5msec.div.)

IC3001-15,19,21 REC
1.0Vp-p (20µsec.div.)

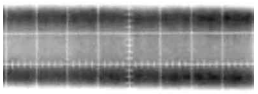
IC3001-45,46 PLAY
0.5Vp-p (20µsec.div.)

IC3001-73 REC/PLAY
5.0Vp-p (5msec.div.)

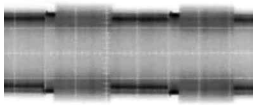


IC3001-74 REC/PLAY
5.0Vp-p (5msec.div.)

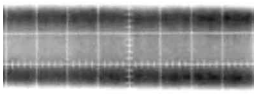
IC3001-80 REC/PLAY
0.6Vp-p (10msec.div.)



IC3001-85 PLAY
150mVp-p (20µsec.div.)

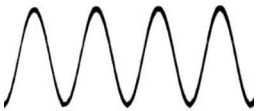


IC3001-86 REC
1.8Vp-p (5msec.div.)



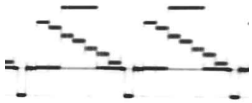
IC3001-87 PLAY
150mVp-p (20µsec.div.)

IC3001-96 PLAY
5.0Vp-p (5msec.div.)

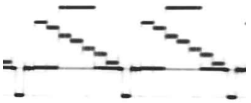


IC3001-98 REC
2.4Vp-p (1msec.div.)

PP3001-8 PLAY
0.8Vp-p (50µsec.div.)



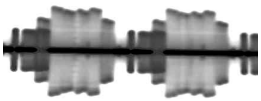
PP3001-10 REC/PLAY
0.5Vp-p (20µsec.div.)



PP3001-12 REC/PLAY
0.5Vp-p (20µsec.div.)

PP3002-4 REC/PLAY
2.0Vp-p (20µsec.div.)

PP3002-6 REC/PLAY
2.0Vp-p (20 µsec.div.)

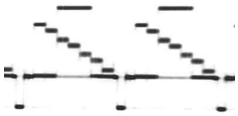


PP3002-8 REC/PLAY
1.6Vp-p (20µsec.div.)

PP3002-10 REC/PLAY
2.0Vp-p (20µsec.div.)

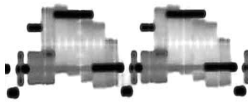
PP3002-12 REC
0.8Vp-p (20µsec.div.)

PP3002-14 REC
0.5Vp-p (20µsec.div.)

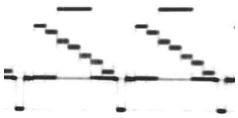


PP3002-16 REC
0.5Vp-p (20µsec.div.)

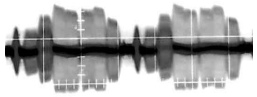
PP3002-18 PLAY
2.2Vp-p (20µsec.div.)



IC3301-81 REC
0.8Vp-p (20µsec.div.)

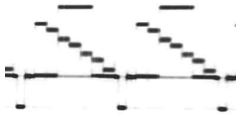


IC3301-83 PLAY
0.7Vp-p (20µsec.div.)

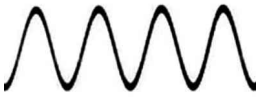


IC3301-88 PLAY
0.4Vp-p (20µsec.div.)

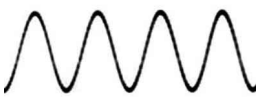
IC3301-93 REC/PLAY
0.6Vp-p (5.0µsec.div.)



IC3301-95 REC/PLAY
1.2Vp-p (10µsec.div.)



IC4501-9,14 REC
0.4Vp-p (5msec.div.)



IC4501-53,57 REC/PLAY
1.4Vp-p (0.2msec.div.)

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

IC4501

JK4801 (AV3) FRONT
AUDIO IN (R)
AUDIO IN (L)
PS4801 PP3901 4
PS4801 PP3901 11
2
4

JK4902 (AV1) TV
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
6 AUDIO IN (L)
TW4504
TW4503
TW4506
QR4504 MUTE
QR4504 MUTE
53
57
9
10

JK4904
AUDIO OUT (R)
AUDIO OUT (L)
TW4505
14
15

JK4901 (AV2) DECODER/EXT
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
6 AUDIO IN (L)
QR4503 MUTE
QR4503 MUTE
51
52

TO TUNER
RFC AUDIO OUT
QR4507 MUTE
59

FROM DECODER
TUNER AUDIO (R)
TUNER AUDIO (L)
8
13

IC3001

FROM DECODER
TUNER AUDIO (N)
1

TO/FROM AC HEAD
A.HEAD (W)
P4002 4
98
A.HEAD (R)
P4002 3
96

REC EQ
MUTE
VCA
PRE AMP
fh TRAP
R
P
MUTE
6
62
2
61
MUTE CTL
79

NORMAL SELECT SWITCH

SWITCH RCH
SWITCH LCH

OUTPUT SELECT SWITCH RCH
OUTPUT SELECT SWITCH LCH

INPUT SELECT SWITCH RCH
INPUT SELECT SWITCH LCH

PNR RCH
PNR LCH

AGC & SWITCH
AGC

FM MODULATOR/ DEMODULATOR
FM MODULATOR/ DEMODULATOR

LPF
LPF
BPF
BPF

AGC & SWITCH

IIC BUS INTERFACE
42
43
MAIN IIC CLOCK
MAIN IIC DATA
TO/FROM SYSTEM CONTROL

VCO F0
45
FSC
FROM LUMINANCE & CHROMINANCE

TW4511
27
AUDIO H.SW
FROM SYSTEM CONTROL

D.FM REC (H)
30
FROM SYSTEM CONTROL

PREAMP & SWITCH
29
TW4502
TW4501
24
21
22
P5001 8
P5001 9
P5001 10
L
R
Hi-Fi AUDIO HEAD

MUTE CTL
36
MUTE (H)
FROM SYSTEM CONTROL

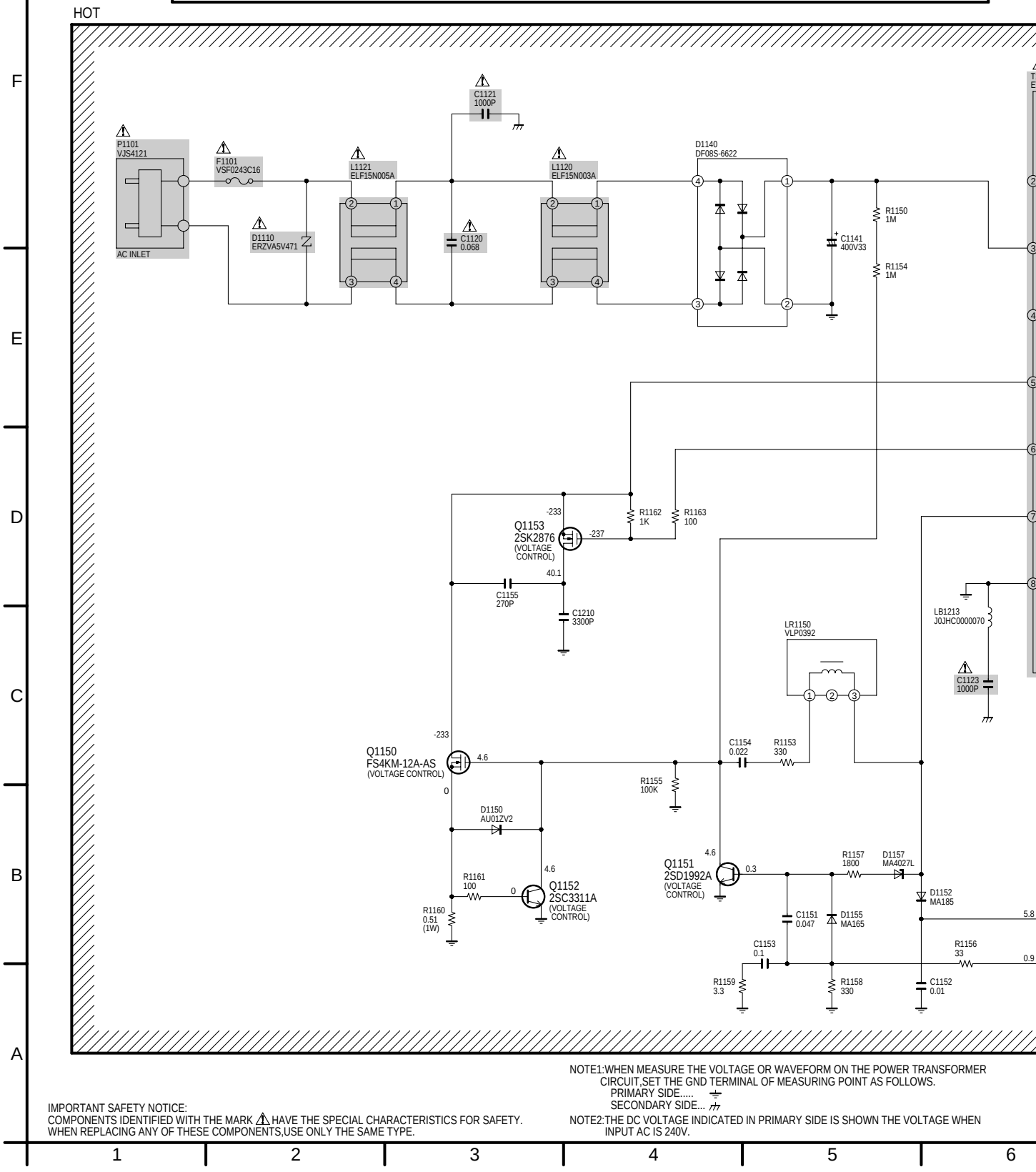
NV-SV120EC/EB/EP
AUDIO BLOCK DIAGRAM

8 SCHEMATIC DIAGRAMS

8.1. POWER TRANSFORMER SECTION IN MAIN SCHEMATIC DIAGRAM

CAUTION

THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

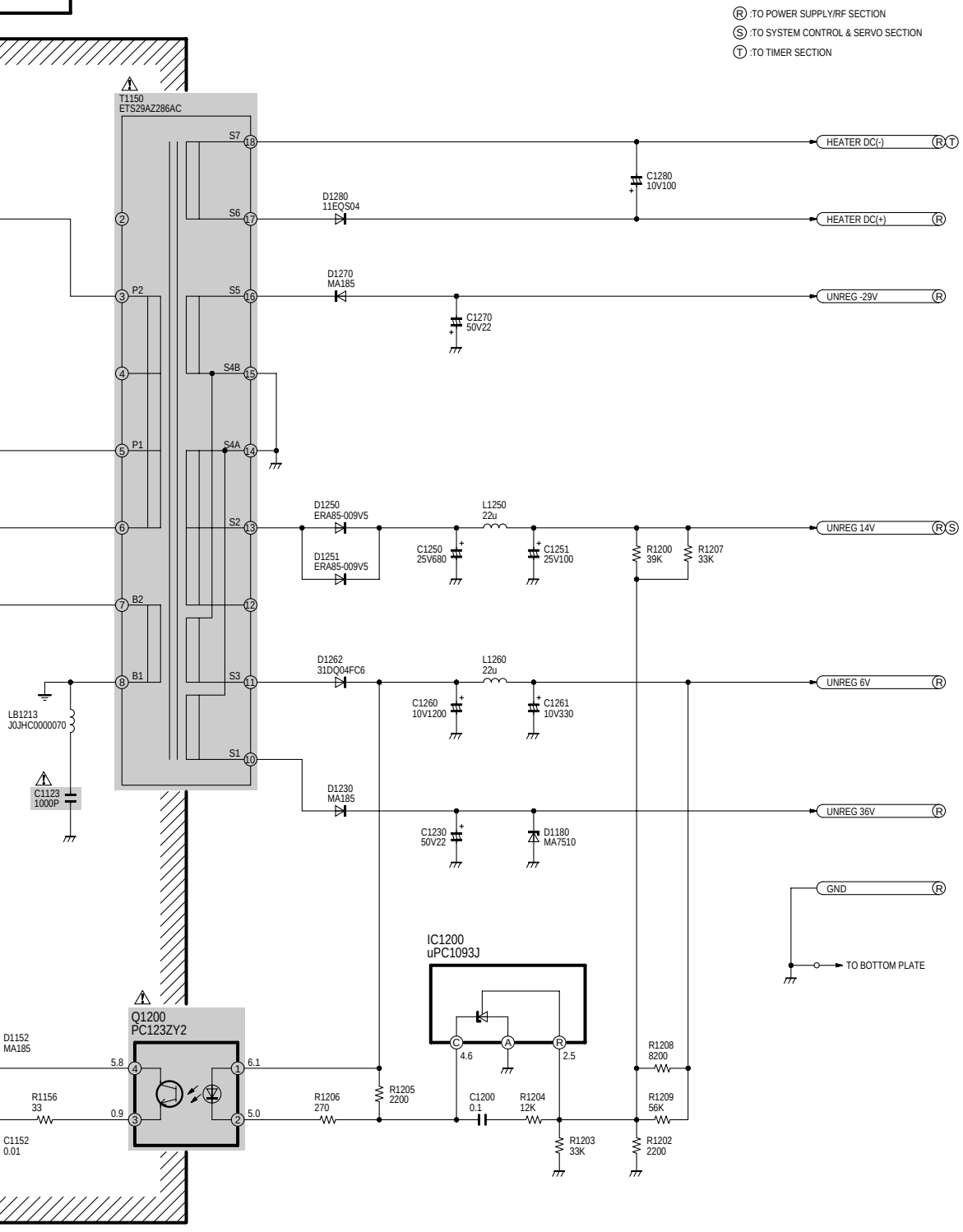


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.

NOTE1:WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT,SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE..... ⏚
SECONDARY SIDE... ⏚
NOTE2:THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

M

ARY
CE OF



ANSFORMER
S.

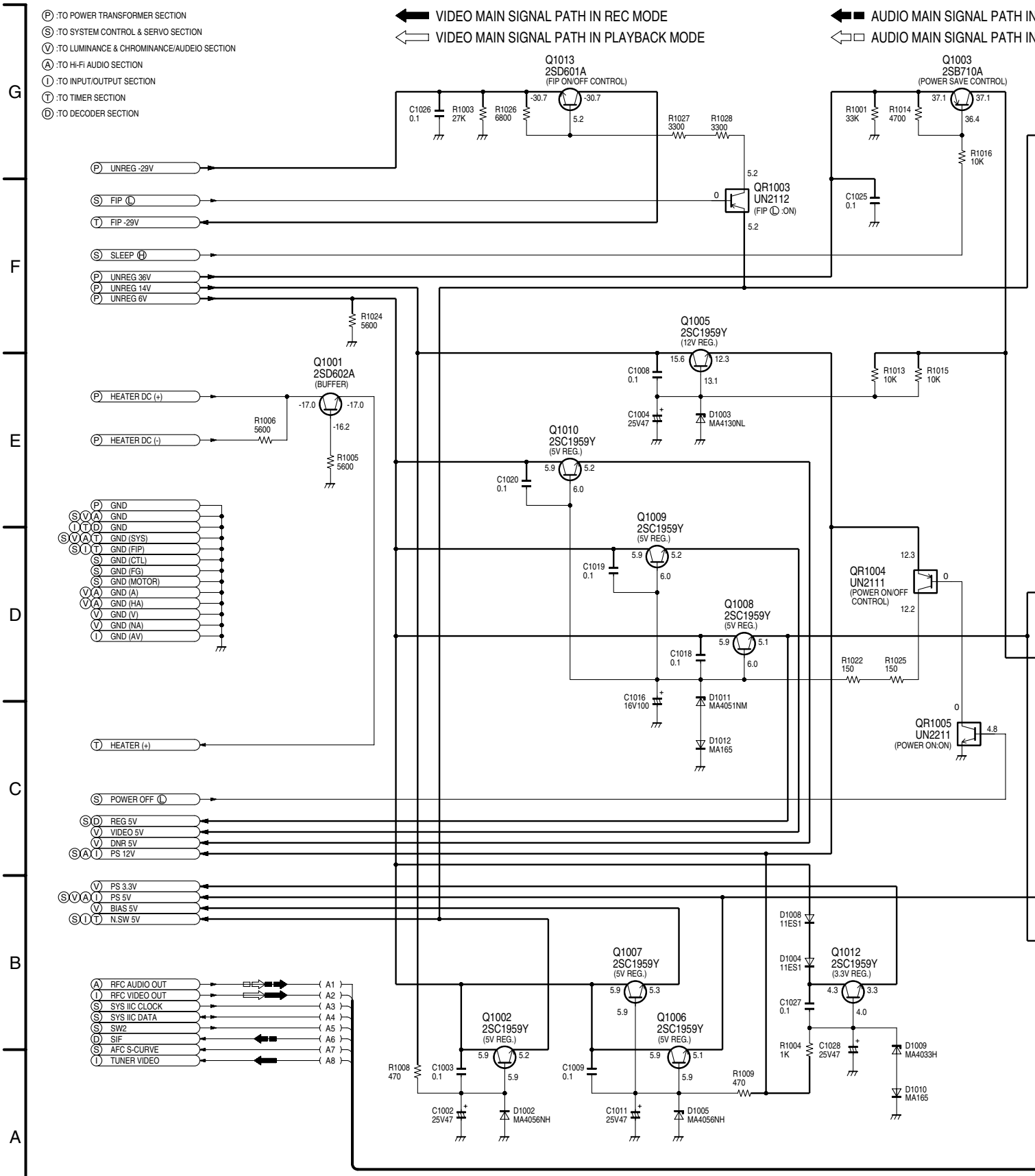
TAGE WHEN

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:THE MEASURMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-SV120EB/EC/EP
POWER TRANSFORMER
SECTION SCHEMATIC DIAGRAM

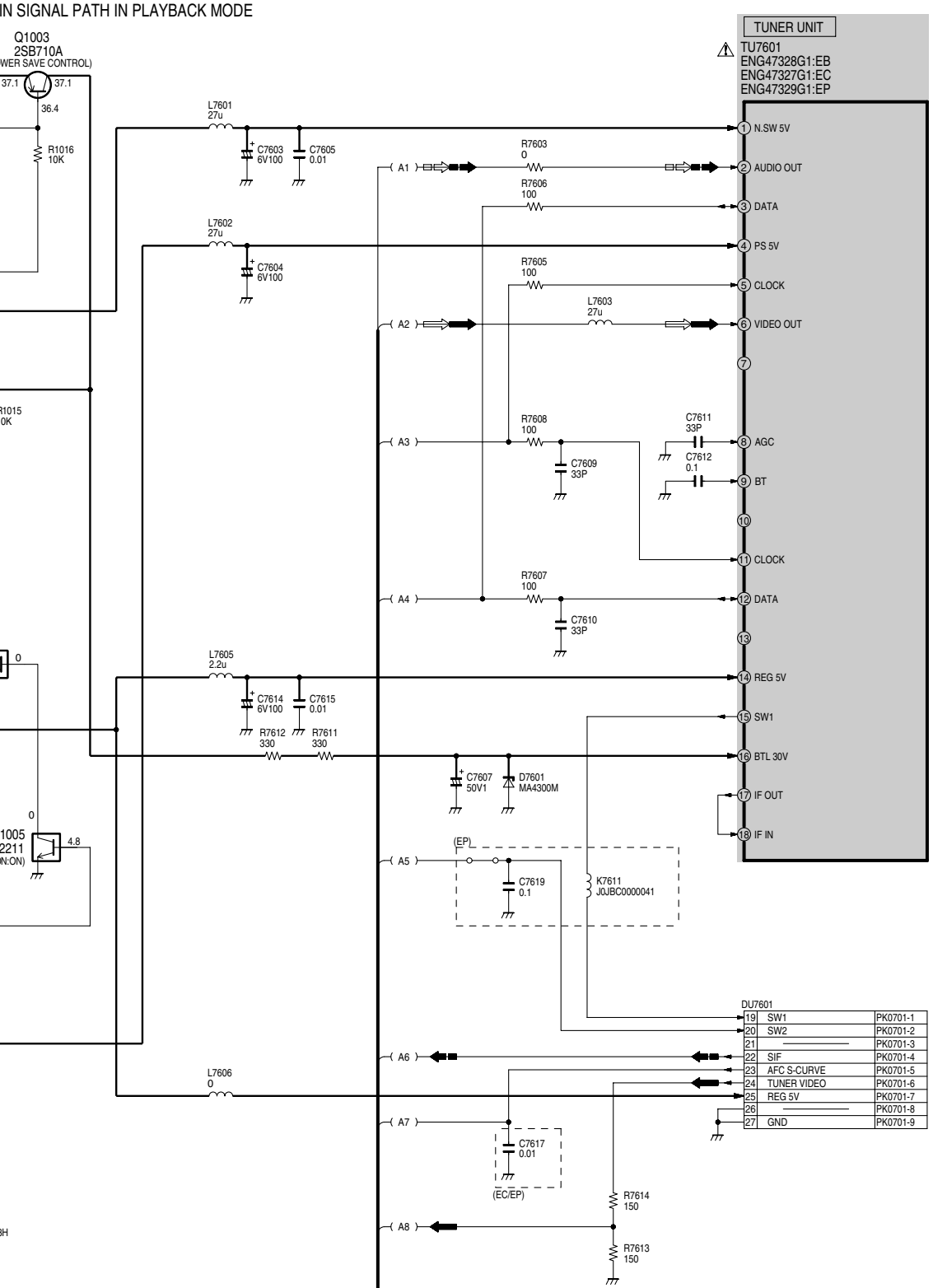
6 | 7 | 8 | 9 | 10

8.2. POWER SUPPLY/ RF SECTION IN MAIN SCHEMATIC DIAGRAM



IN SIGNAL PATH IN REC MODE

IN SIGNAL PATH IN PLAYBACK MODE



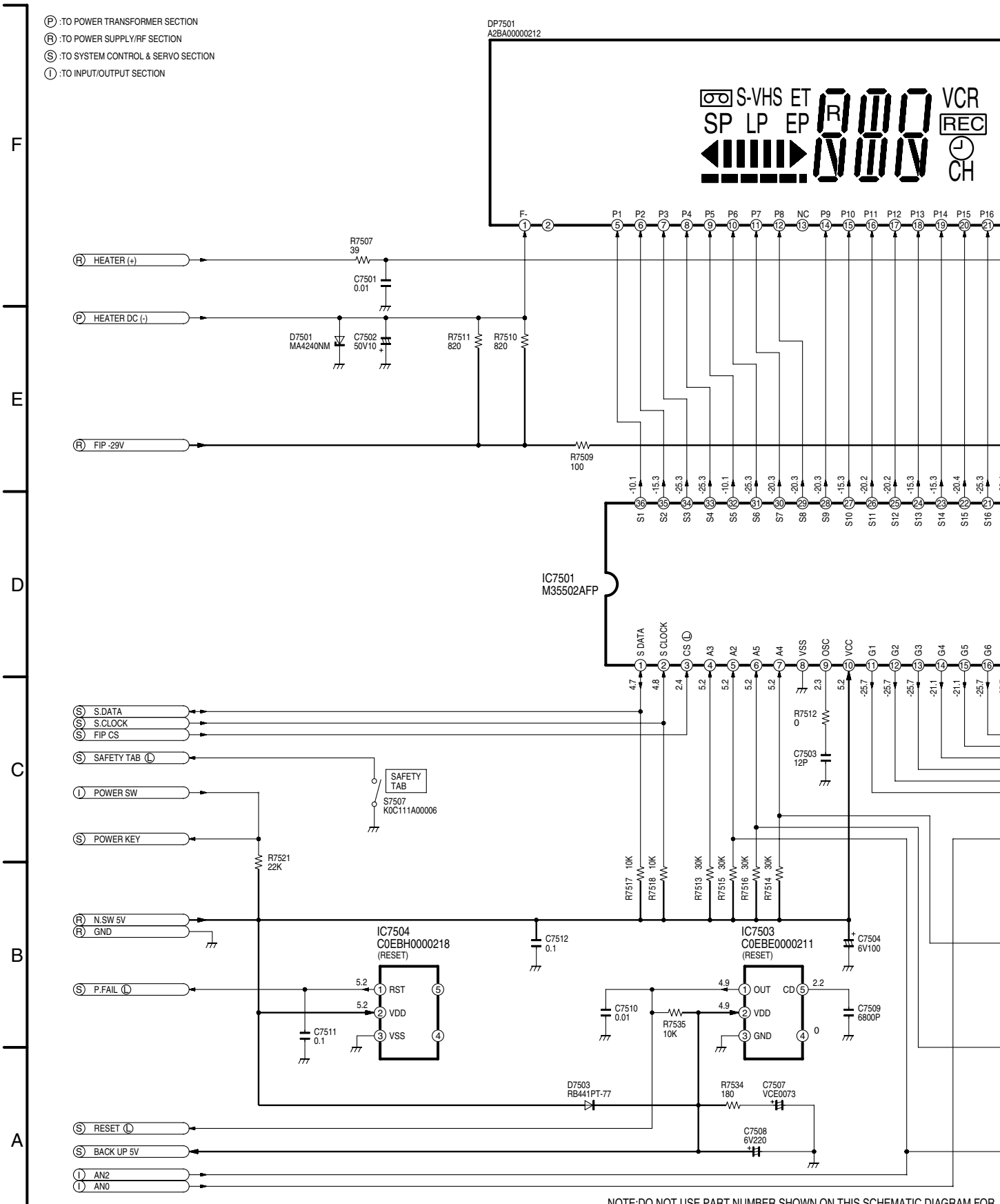
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

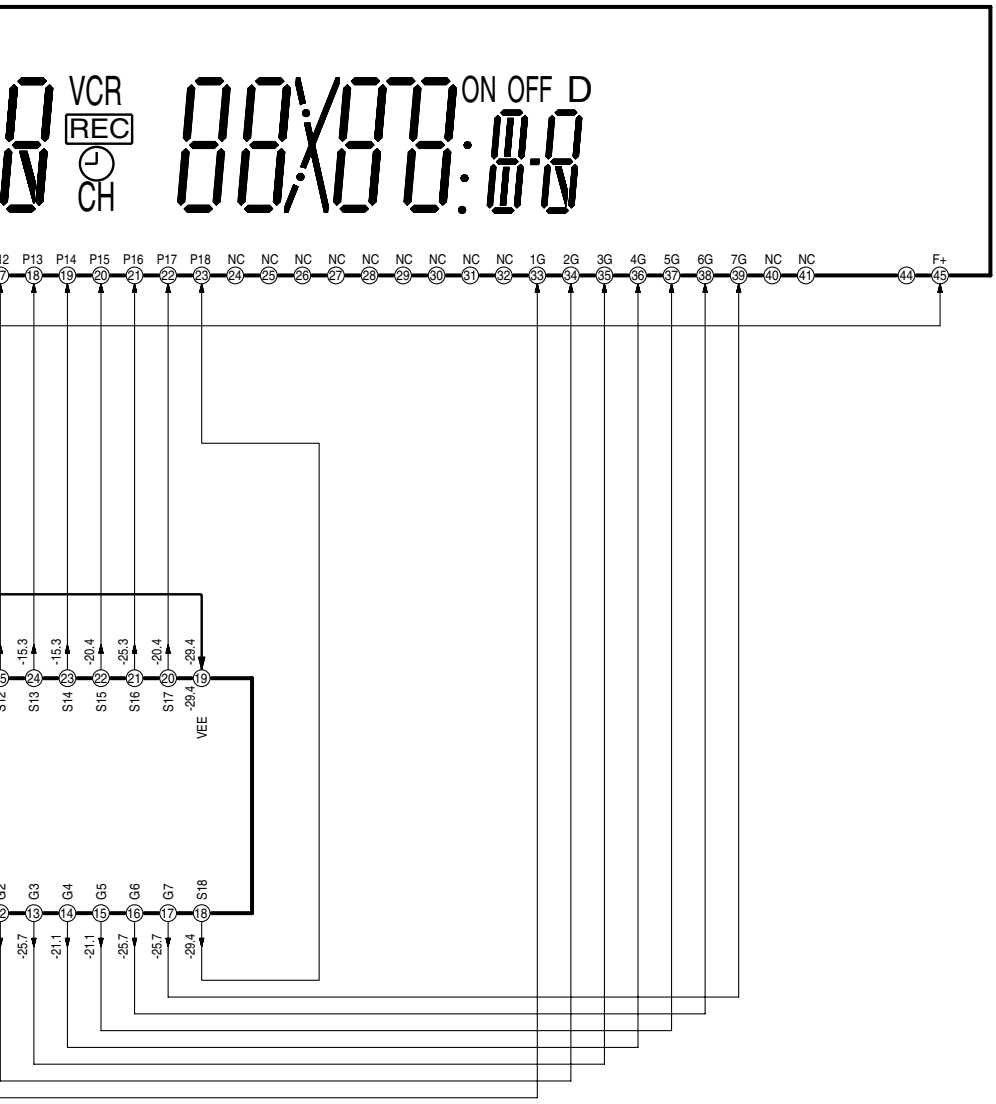
P MODE.

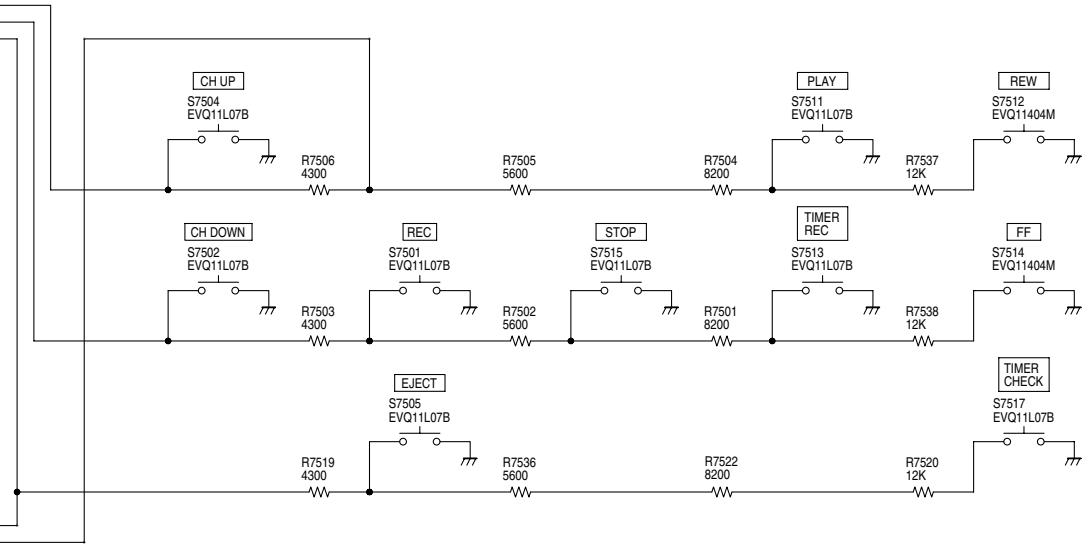
NV-SV120EB/EC/EP
POWER SUPPLY/RF
SECTION SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

8.3. TIMER SECTION IN MAIN SCHEMATIC DIAGRAM





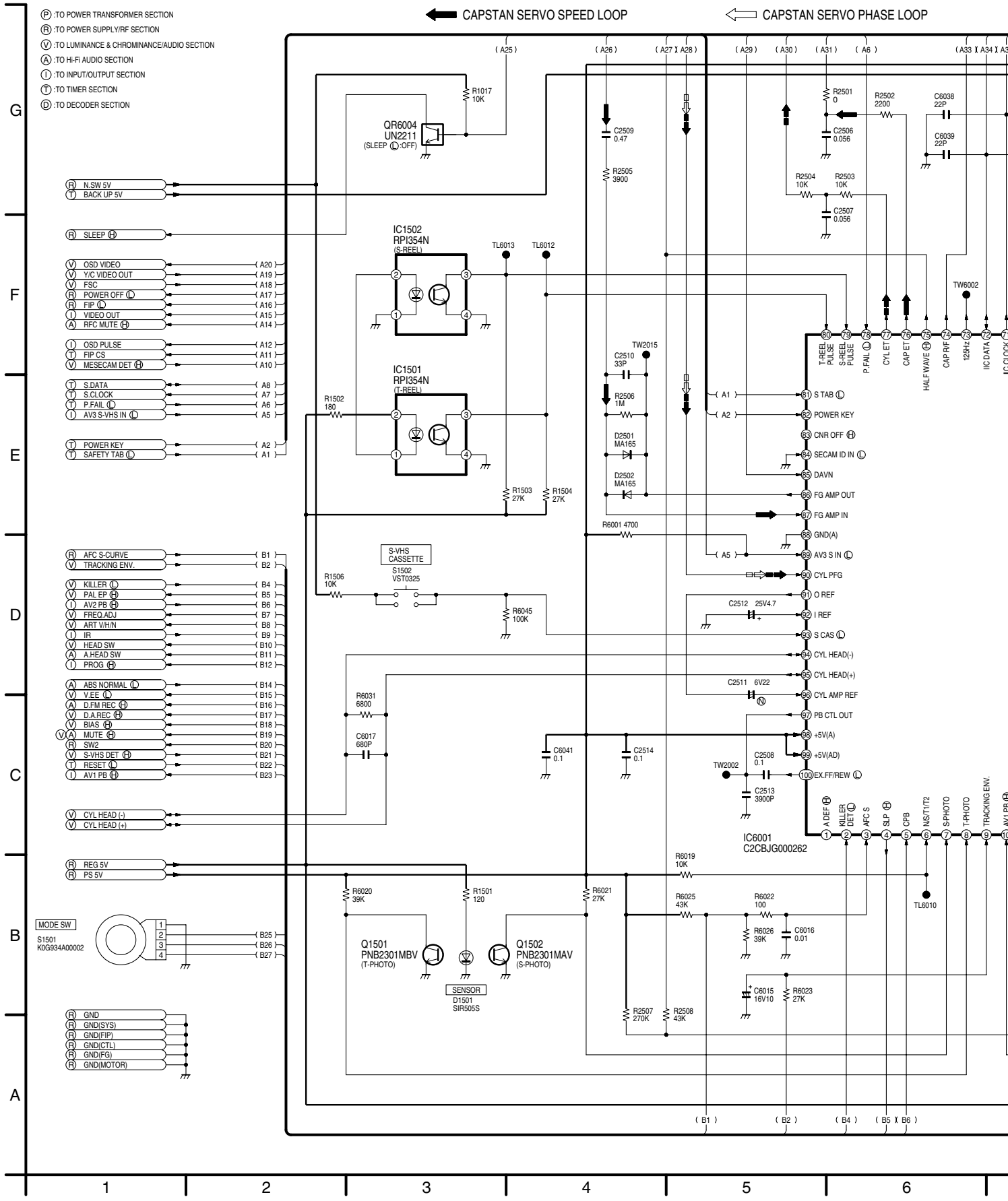


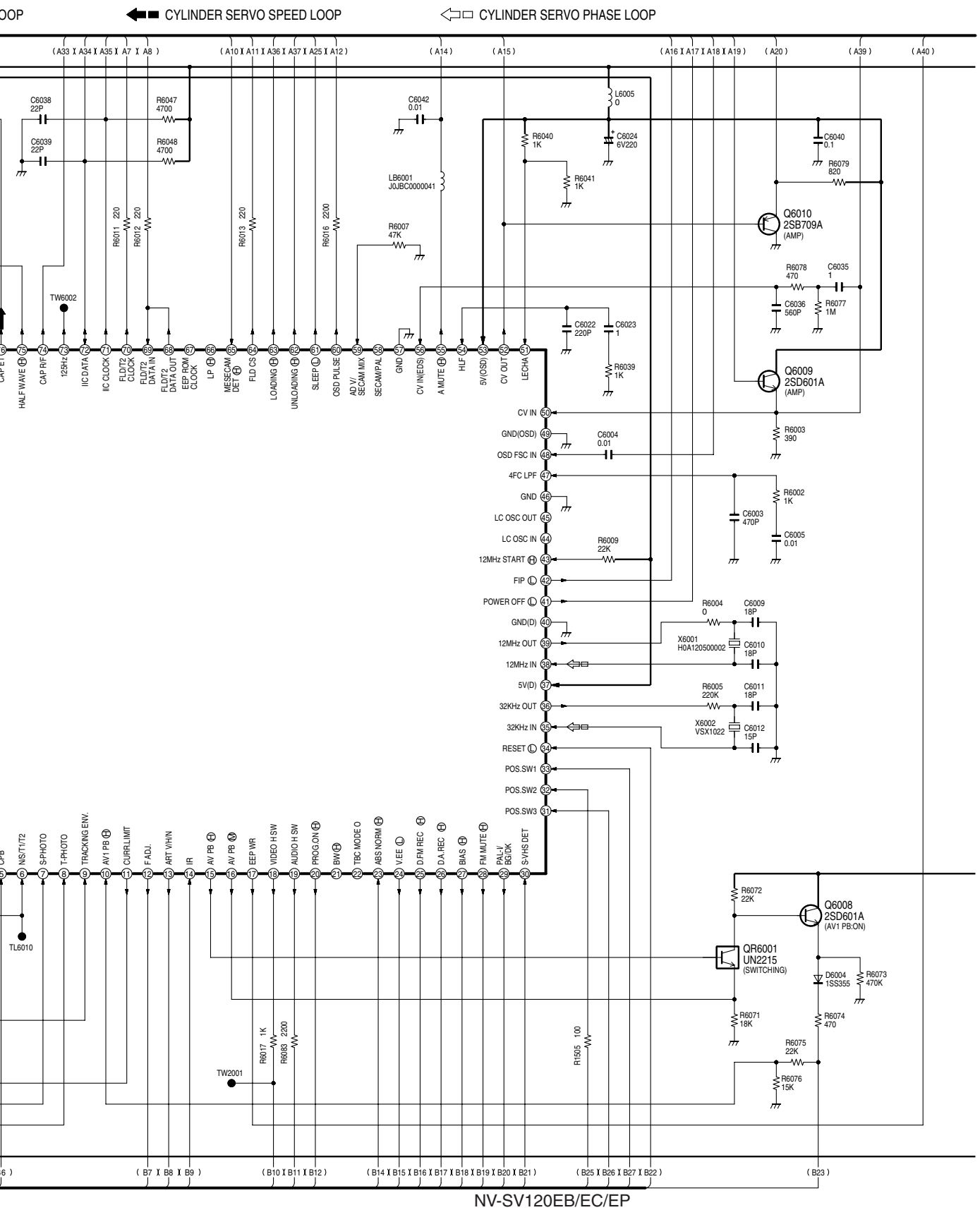
MATIC DIAGRAM FOR
ER TO PARTS LIST.

NV-SV120EB/EC/EP
TIMER SECTION SCHEMATIC DIAGRAM

6 7 8 9

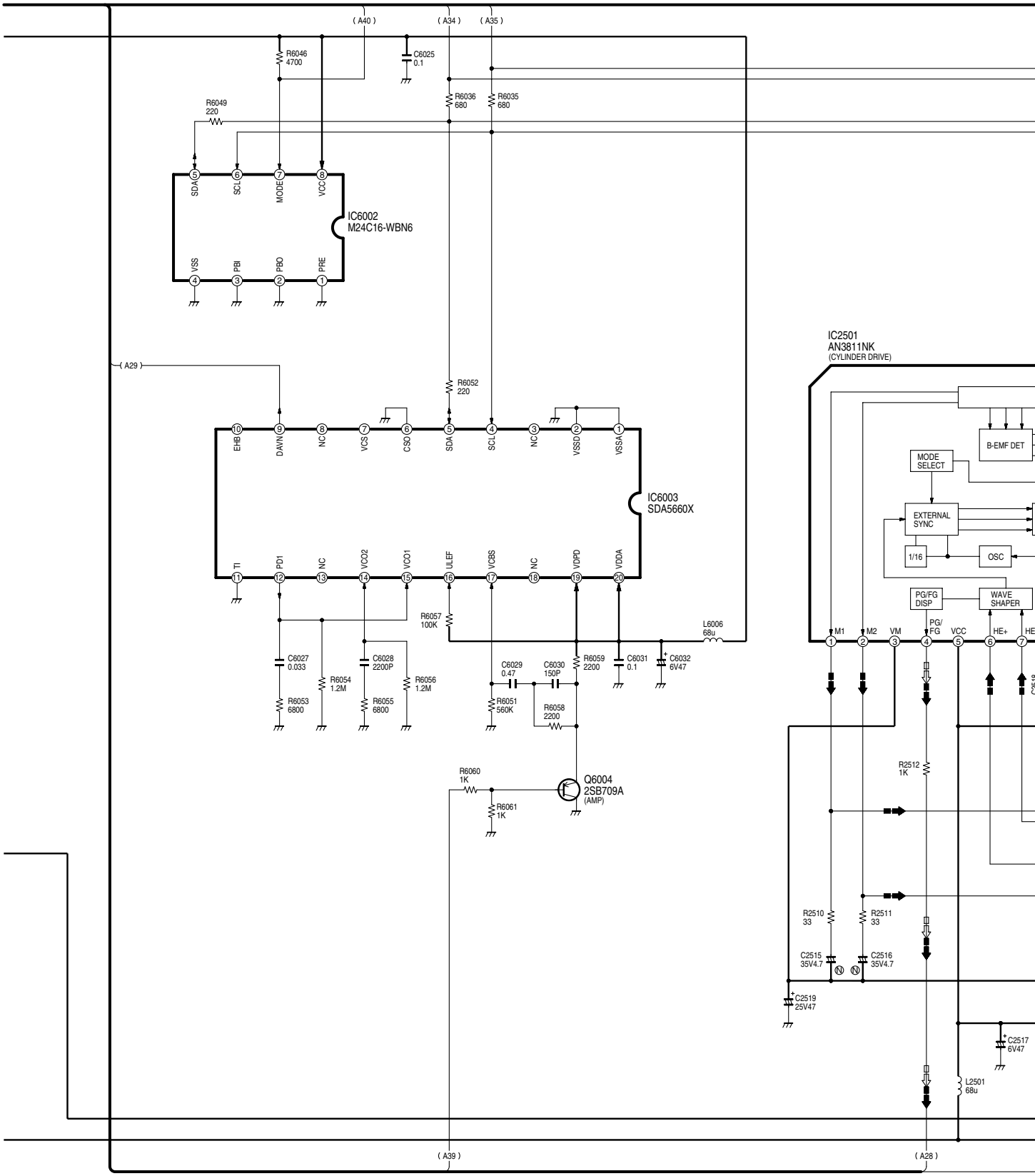
8.4. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM





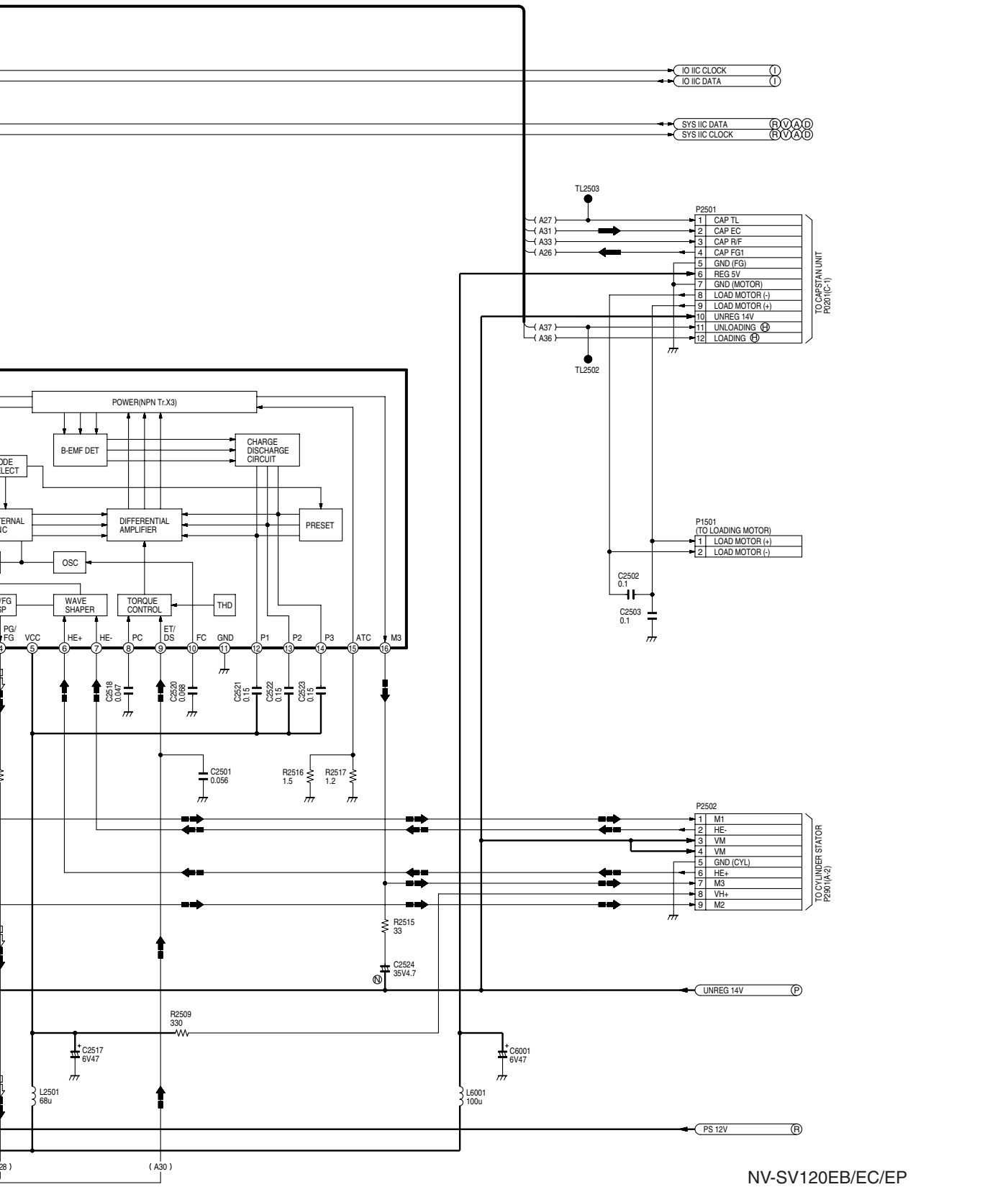
NV-SV120EB/EC/EP
SYSTEM CONTROL & SERVO SECTION SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11



NV-SV120EB/EC/EP
SYSTEM CONTROL & SERVO SECTION SCHEMATIC DIAGRAM

12 | 13 | 14 | 15 | 16 | 17

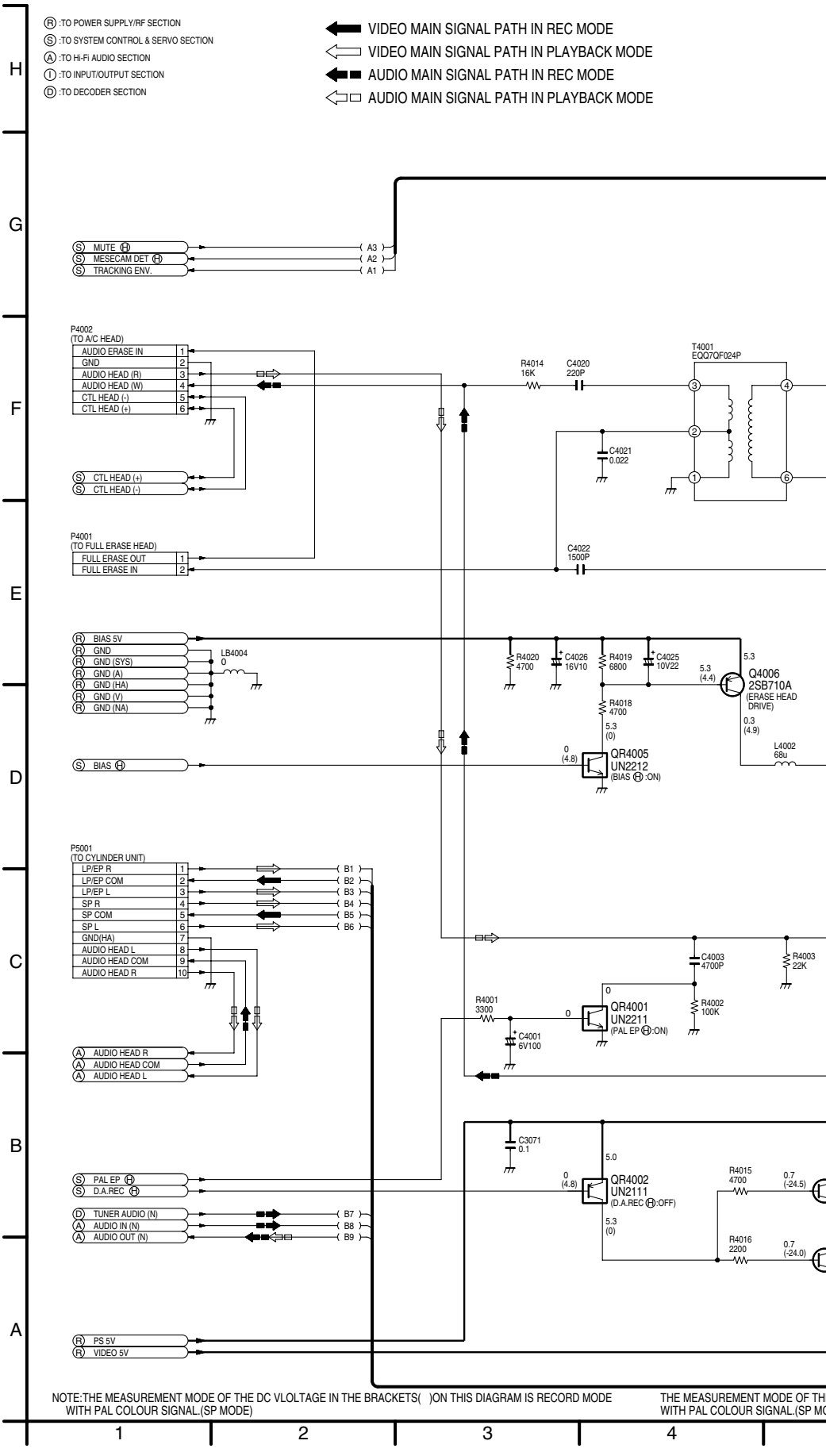


NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

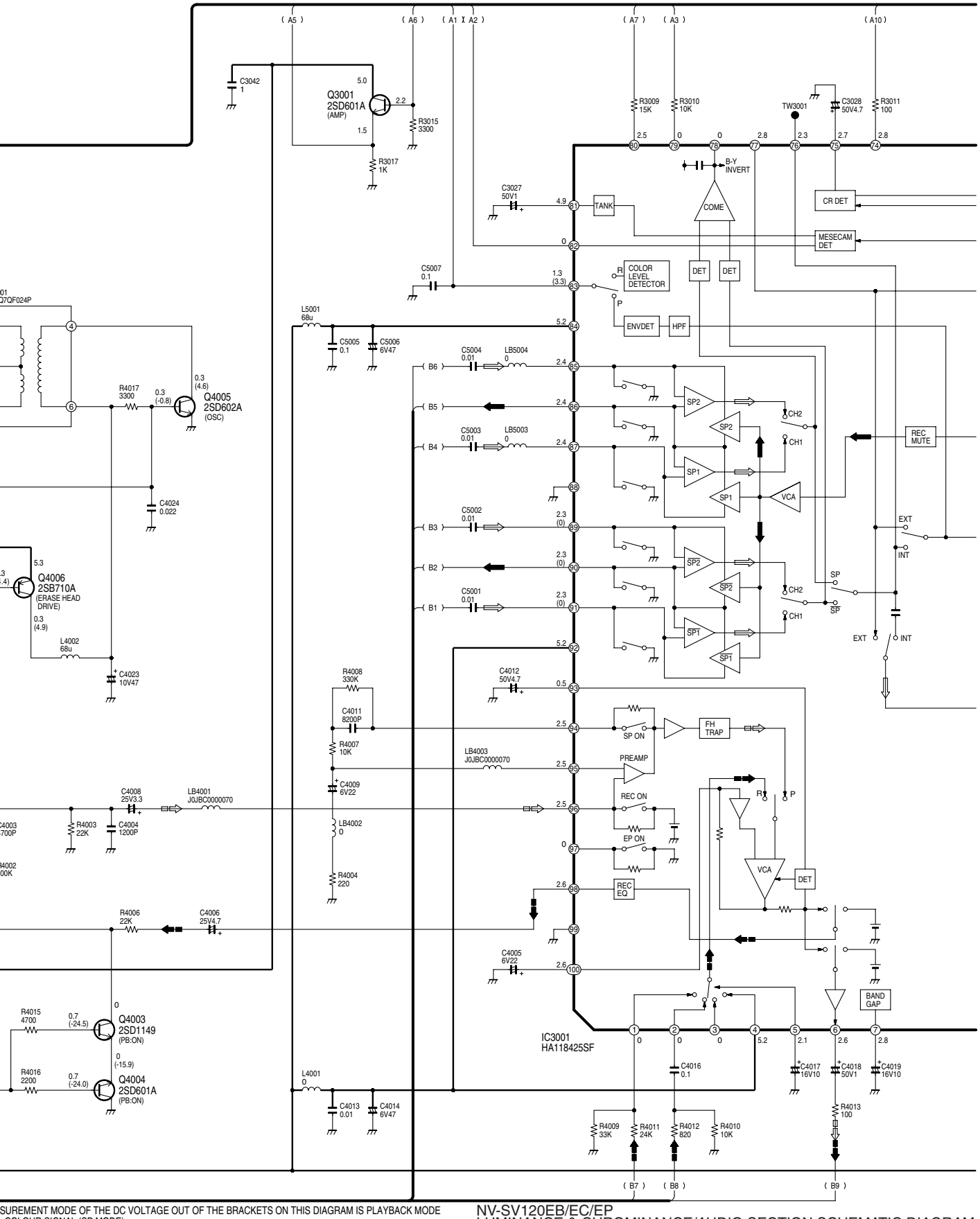
NV-SV120EB/EC/EP
SYSTEM CONTROL & SERVO
SECTION SCHEMATIC DIAGRAM

17 | 18 | 19 | 20 | 21

8.5. LUMINANCE & CHROMINANCE/ AUDIO SECTION IN MAIN SCHEMATIC DIAGR



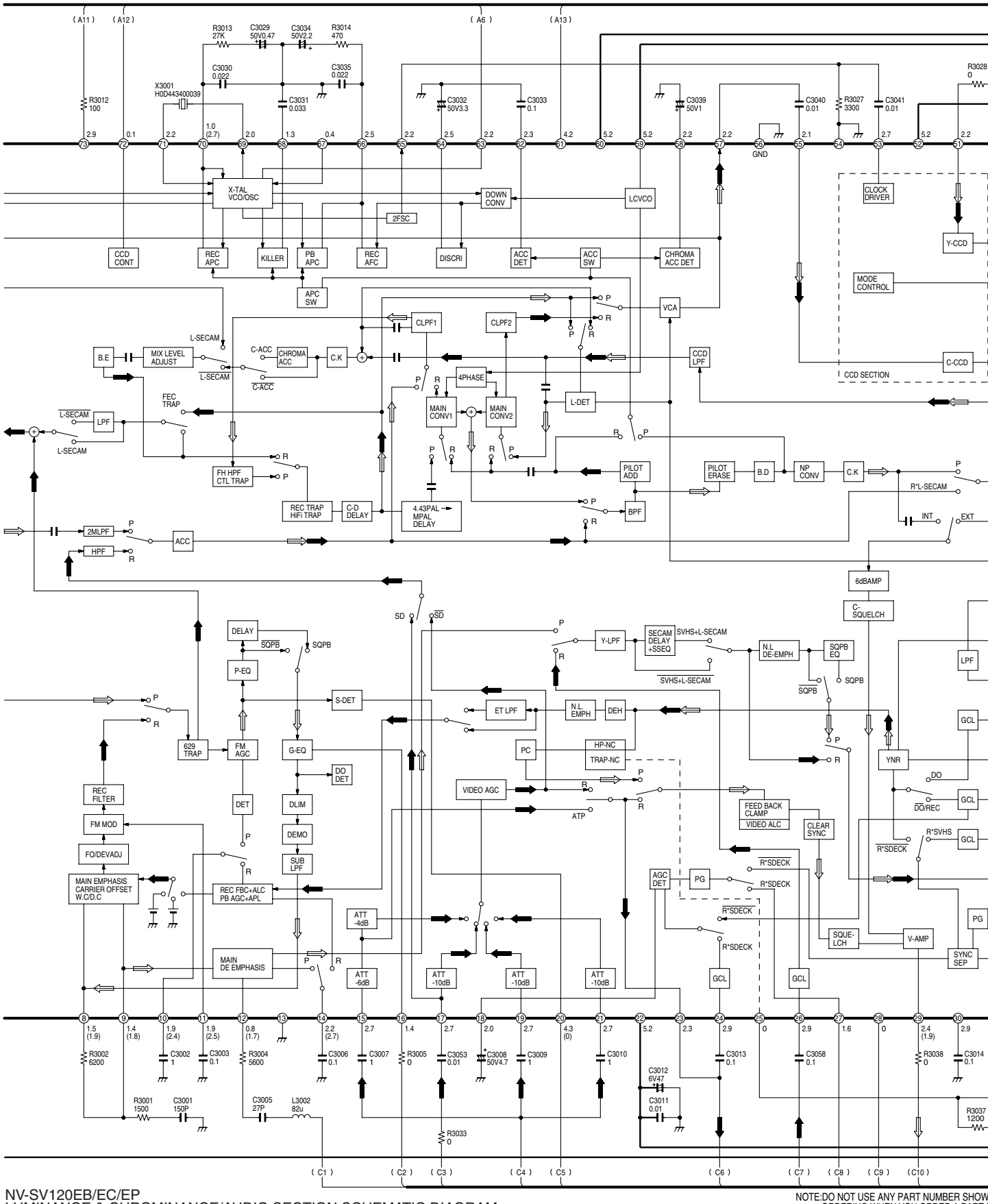
C DIAGRAM



SUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
L COLOUR SIGNAL.(SP MODE)

NV-SV120EB/EC/EP
LUMINANCE & CHROMINANCE/AUDIO SECTION SCHEMATIC DIAGRAM

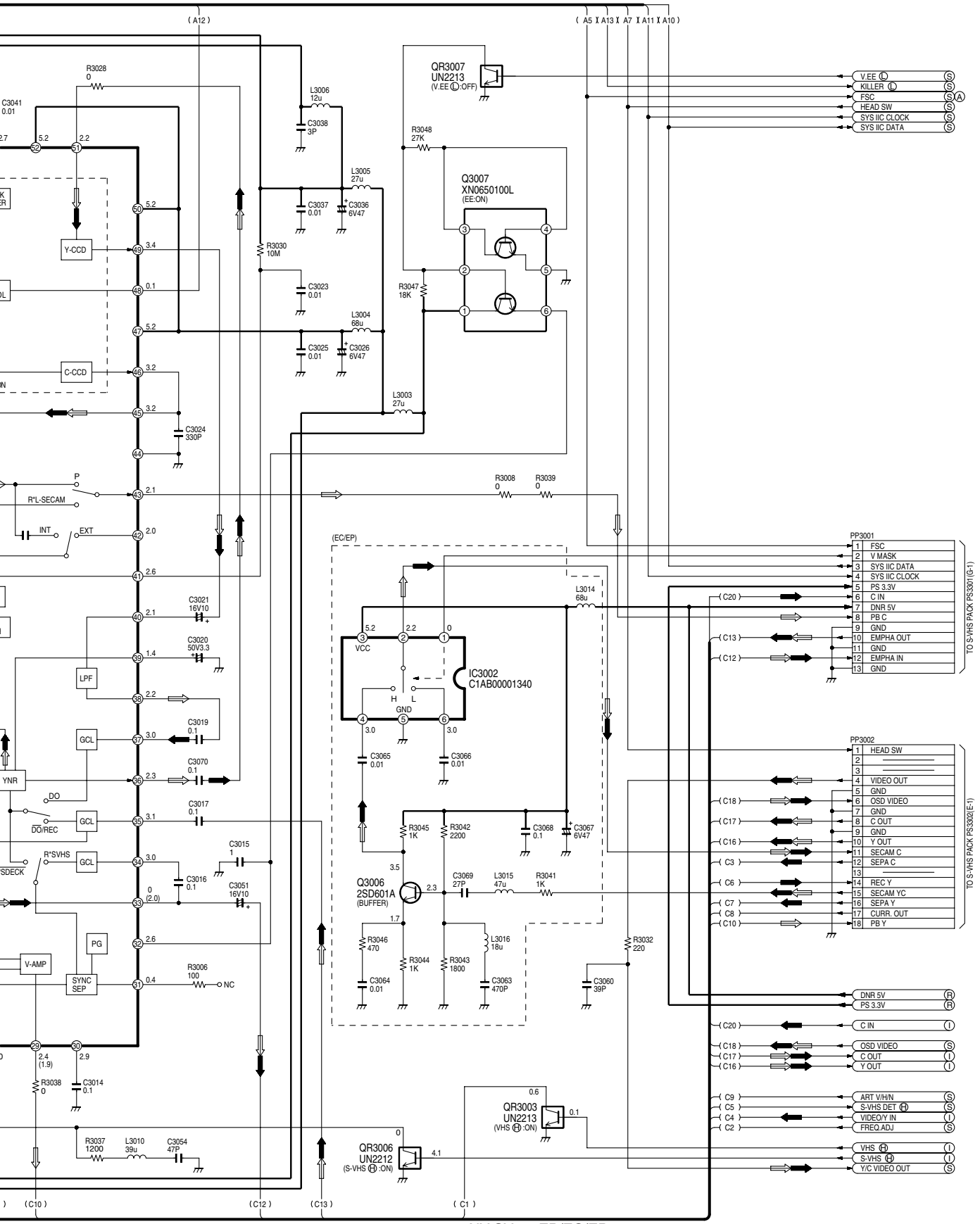
5 | 6 | 7 | 8 | 9 | 10



NV-SV120EB/EC/EP
LUMINANCE & CHROMINANCE/AUDIO SECTION SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOW
ORDERING.WHEN YOU ORDER A PART,

11	12	13	14	15	16

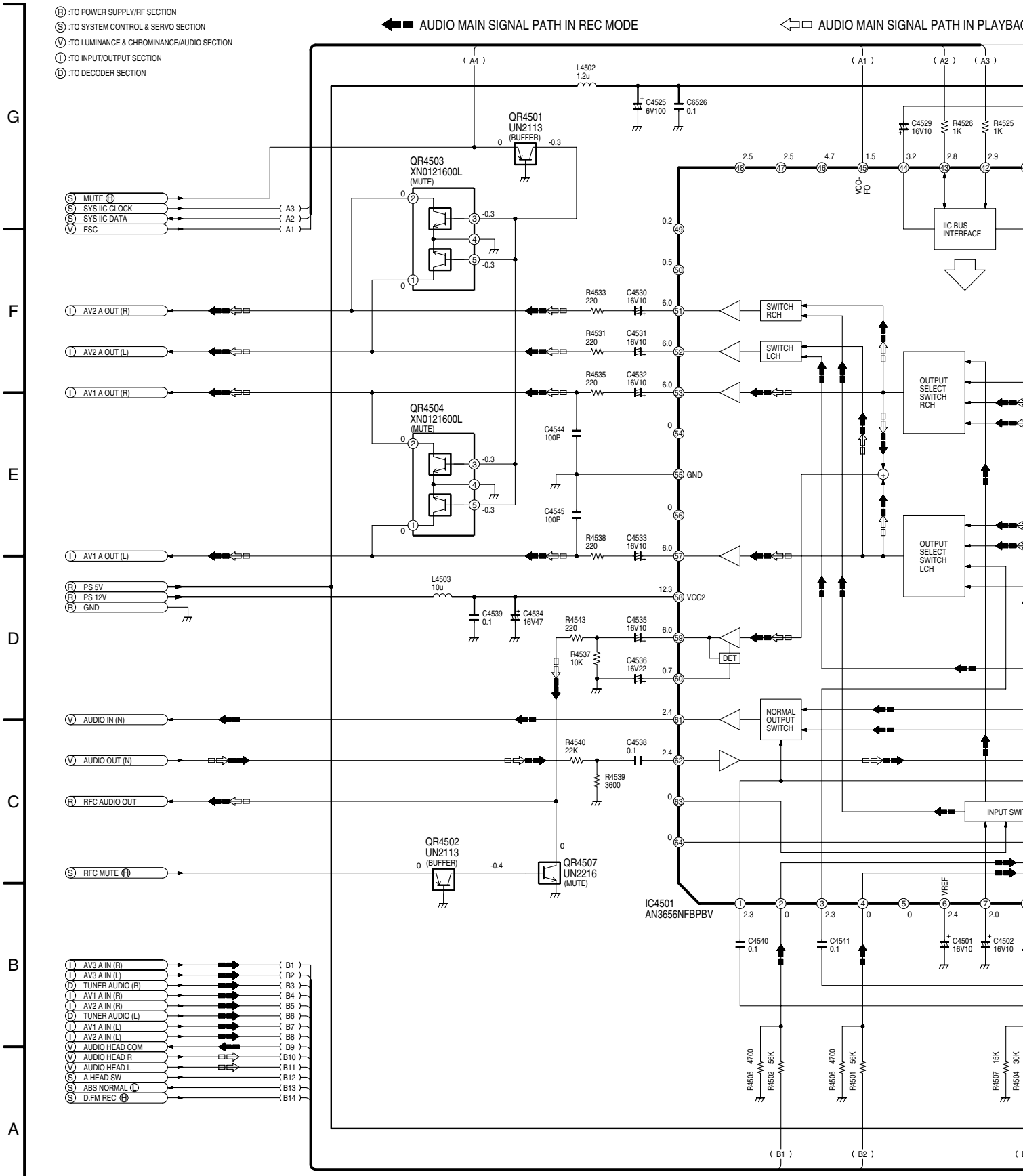


NY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
EN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
LUMINANCE & CHROMINANCE/AUDIO SECTION SCHEMATIC DIAGRAM

16 | 17 | 18 | 19 | 20 | 21

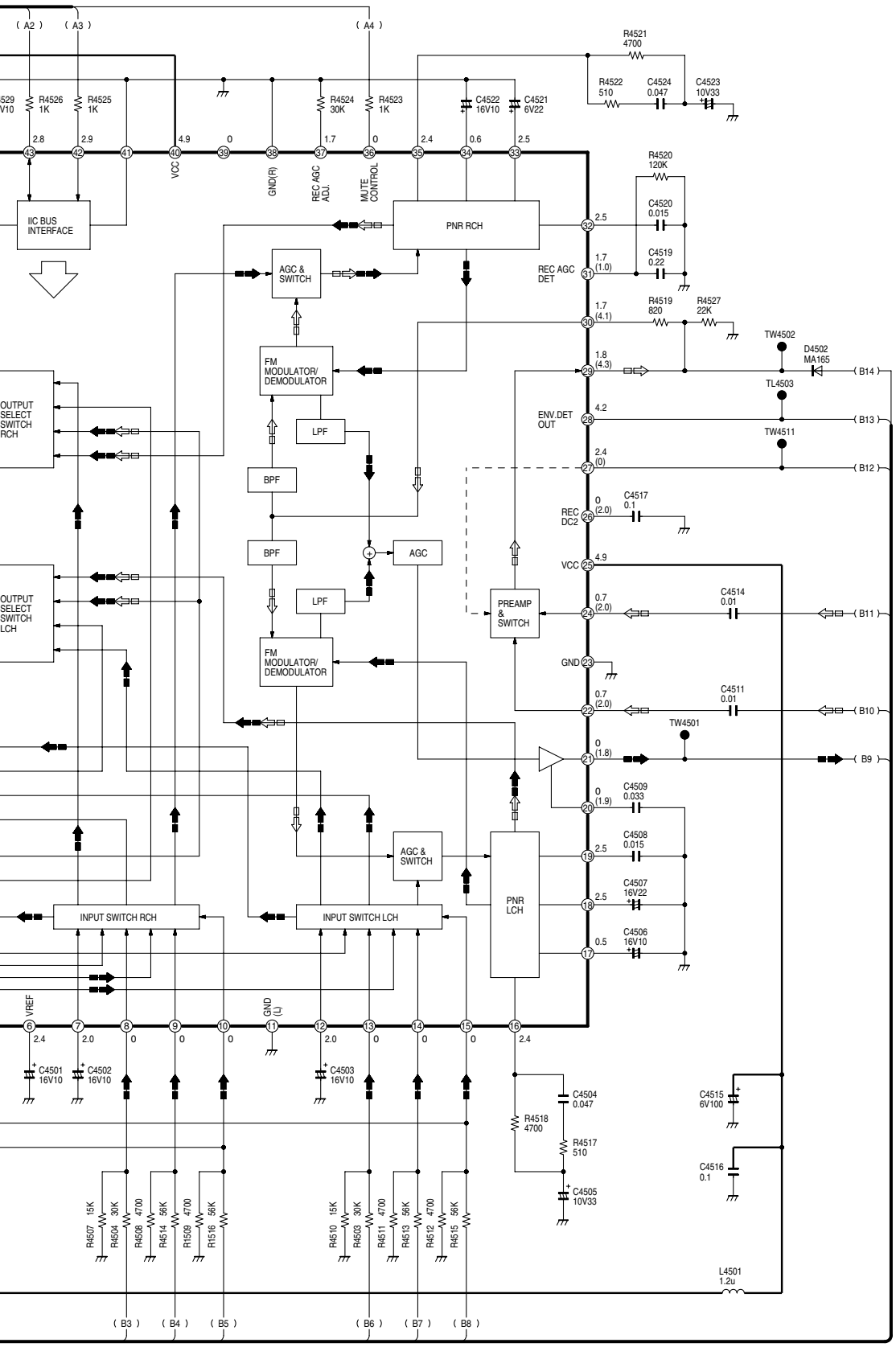
8.6. Hi-Fi AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PI WITH PAL COLOUR SIGNAL.(SP MODE)

AL PATH IN PLAYBACK MODE



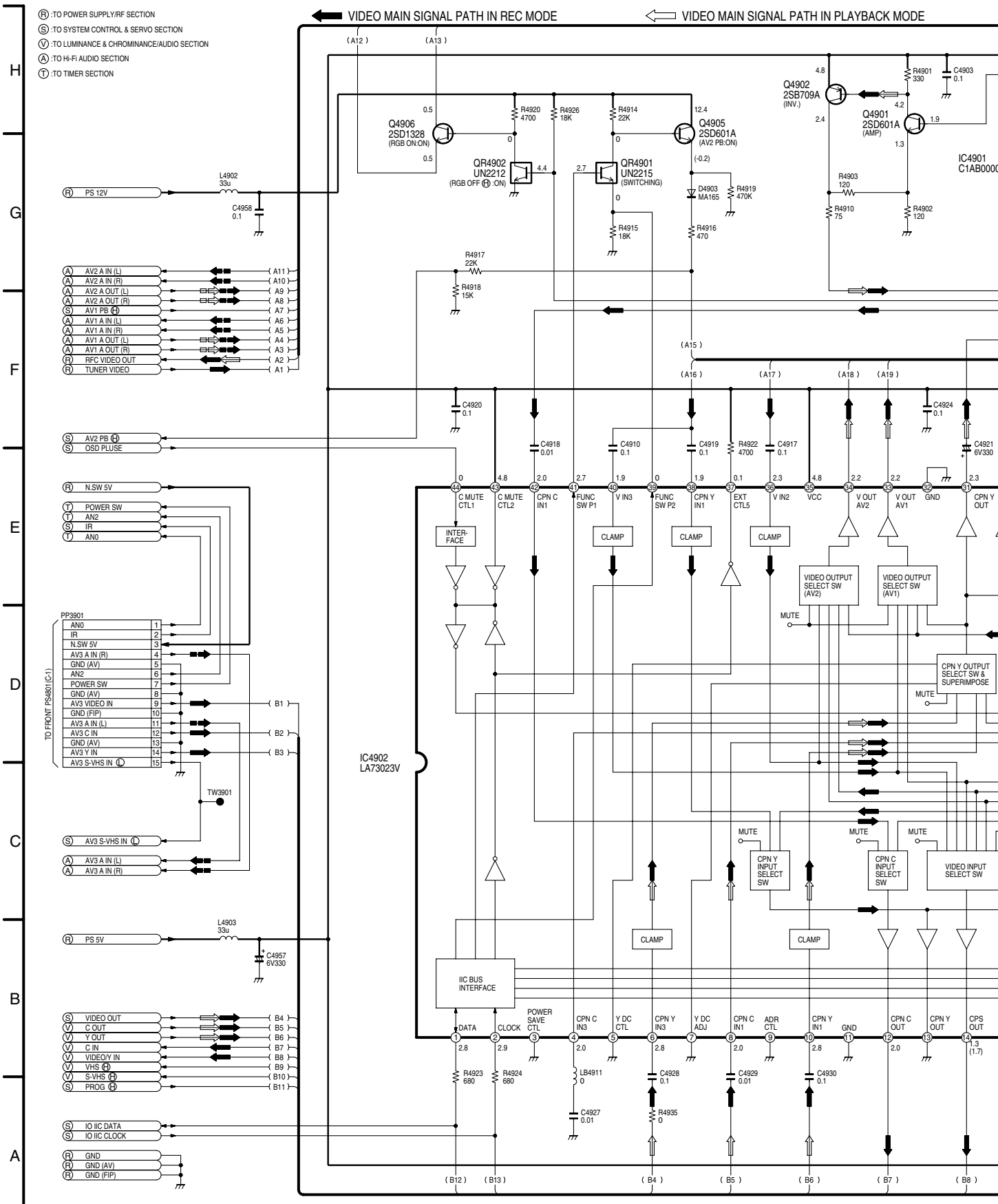
ON THIS DIAGRAM IS PLAYBACK MODE

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
Hi-Fi AUDIO SECTION SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

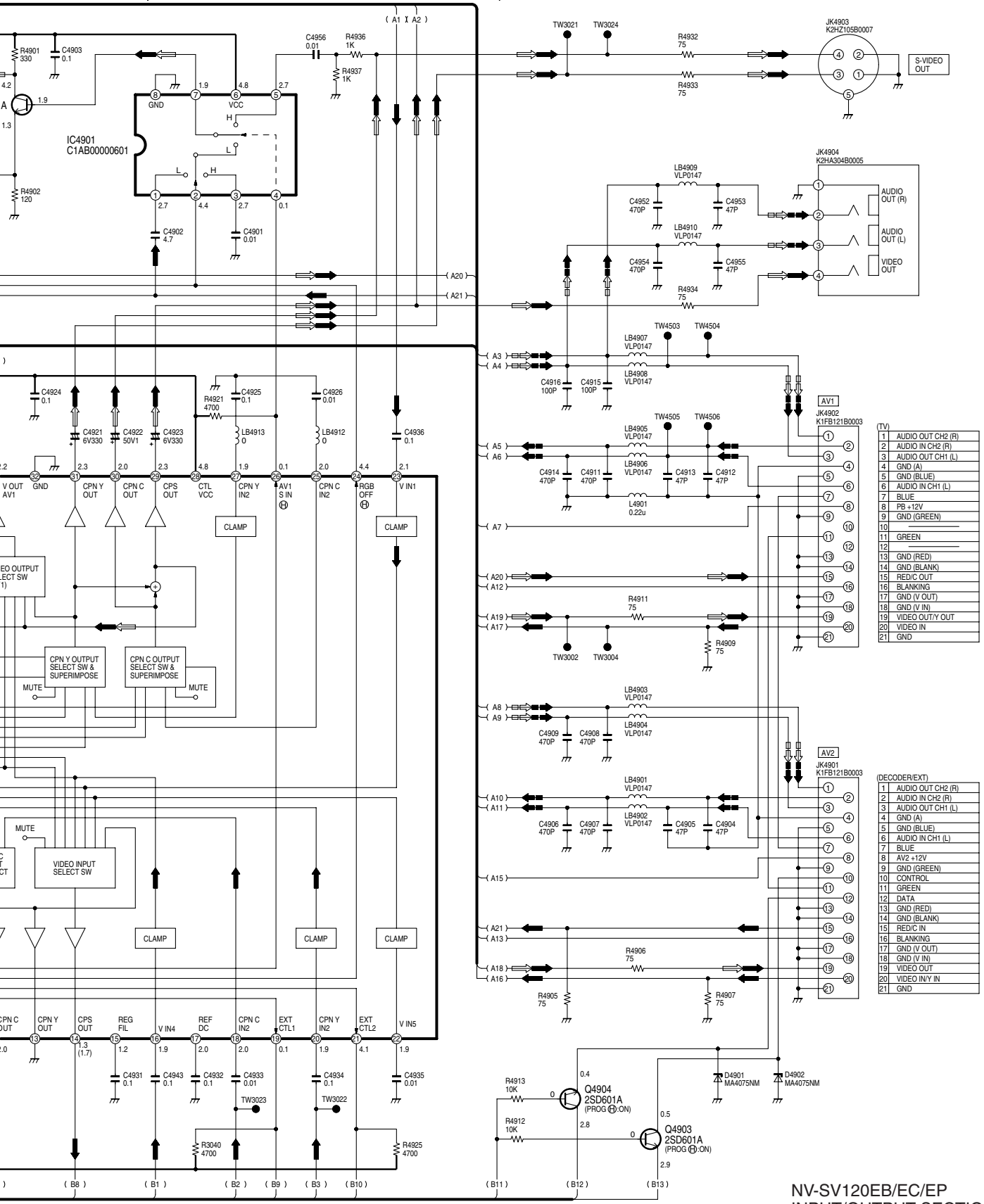
8.7. INPUT/ OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM



MODE

AUDIO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



1	AUDIO OUT CH2 (R)
2	AUDIO IN CH2 (R)
3	AUDIO OUT CH1 (L)
4	GND (A)
5	GND (BLUE)
6	AUDIO IN CH1 (L)
7	BLUE
8	PB +12V
9	GND (GREEN)
10	———
11	GREEN
12	———
13	GND (RED)
14	GND (BLANK)
15	RED/C OUT
16	BLANKING
17	GND (V OUT)
18	GND (V IN)
19	VIDEO OUT/Y OUT
20	VIDEO IN
21	GND

(TV)

1	AUDIO OUT CH2 (R)
2	AUDIO IN CH2 (R)
3	AUDIO OUT CH1 (L)
4	GND (A)
5	GND (BLUE)
6	AUDIO IN CH1 (L)
7	BLUE
8	AV2 +12V
9	GND (GREEN)
10	CONTROL
11	GREEN
12	DATA
13	GND (RED)
14	GND (BLANK)
15	RED/C IN
16	BLANKING
17	GND (V OUT)
18	GND (V IN)
19	VIDEO OUT
20	VIDEO IN/Y IN
21	GND

(DECODER/EXT)

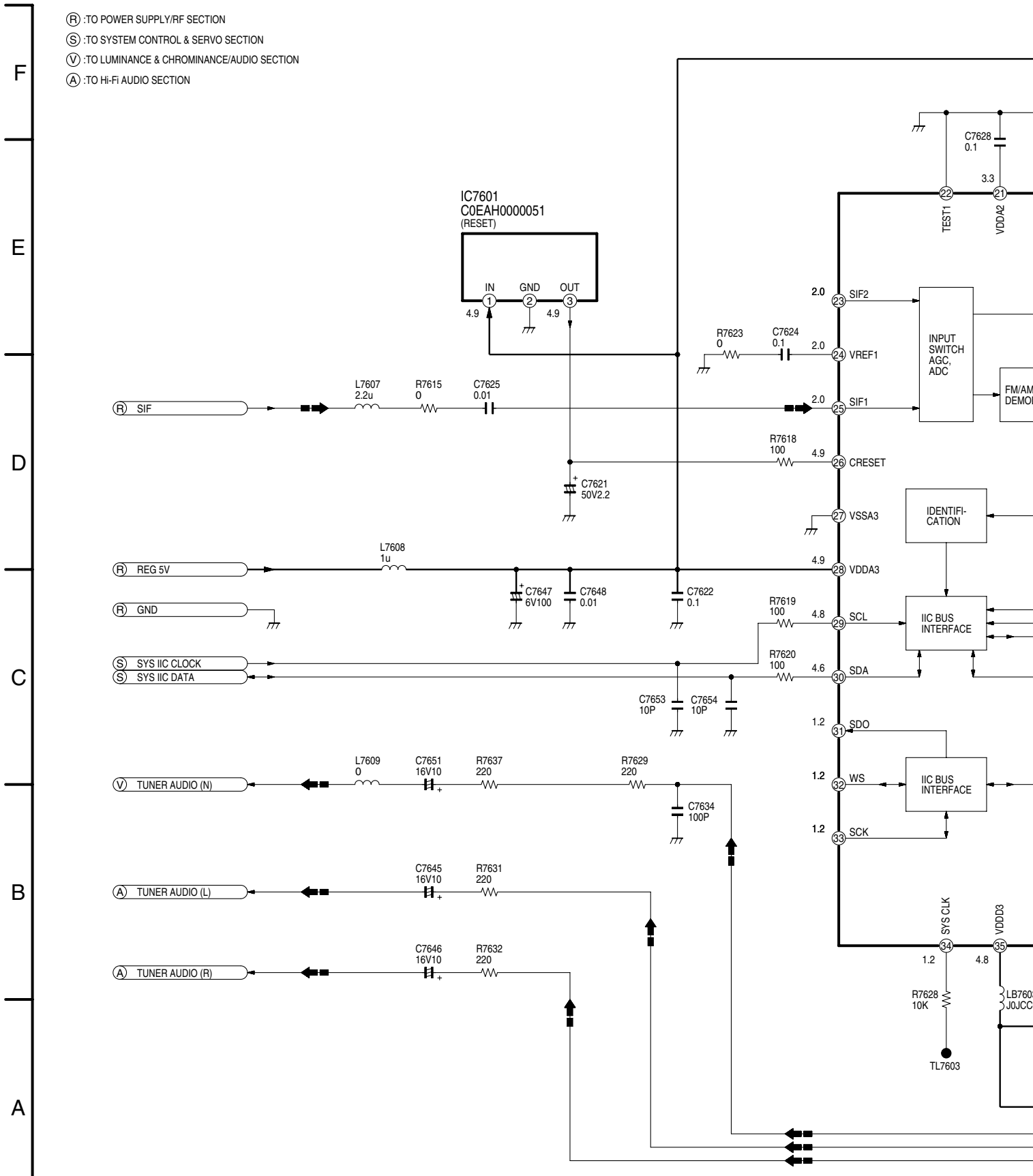
AGRAM IS PLAYBACK MODE

NOTE:DO NOT ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
INPUT/OUTPUT SECTION
SCHEMATIC DIAGRAM

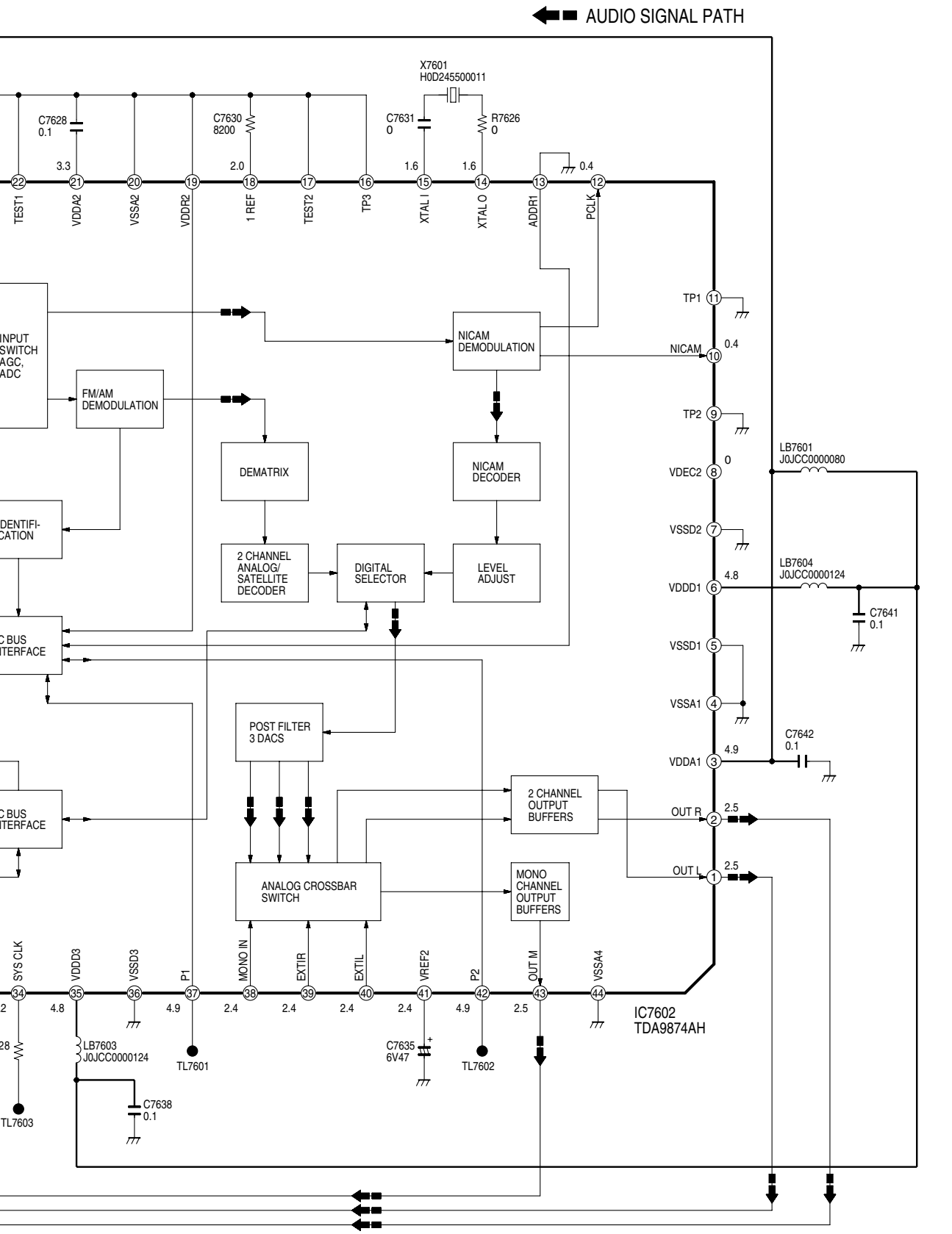
7 8 9 10 11 12

8.8. DECODER SECTION IN MAIN SCHEMATIC DIAGRAM



NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCH
ORDERING.WHEN YOU ORDER A PART,PLEASE REFER

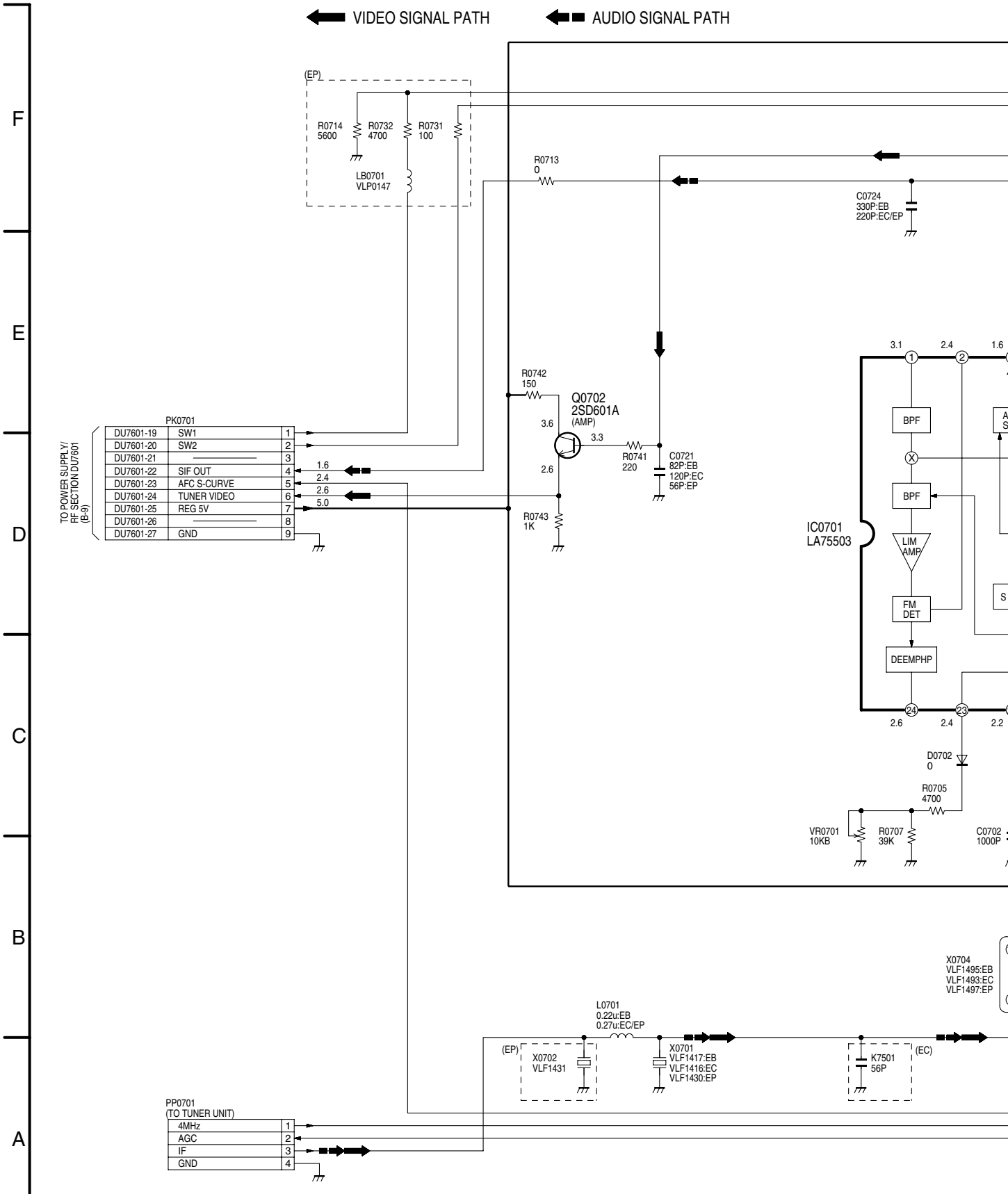


OWN ON THIS SCHEMATIC DIAGRAM FOR
RT,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
DECODER SECTION SCHEMATIC DIAGRAM

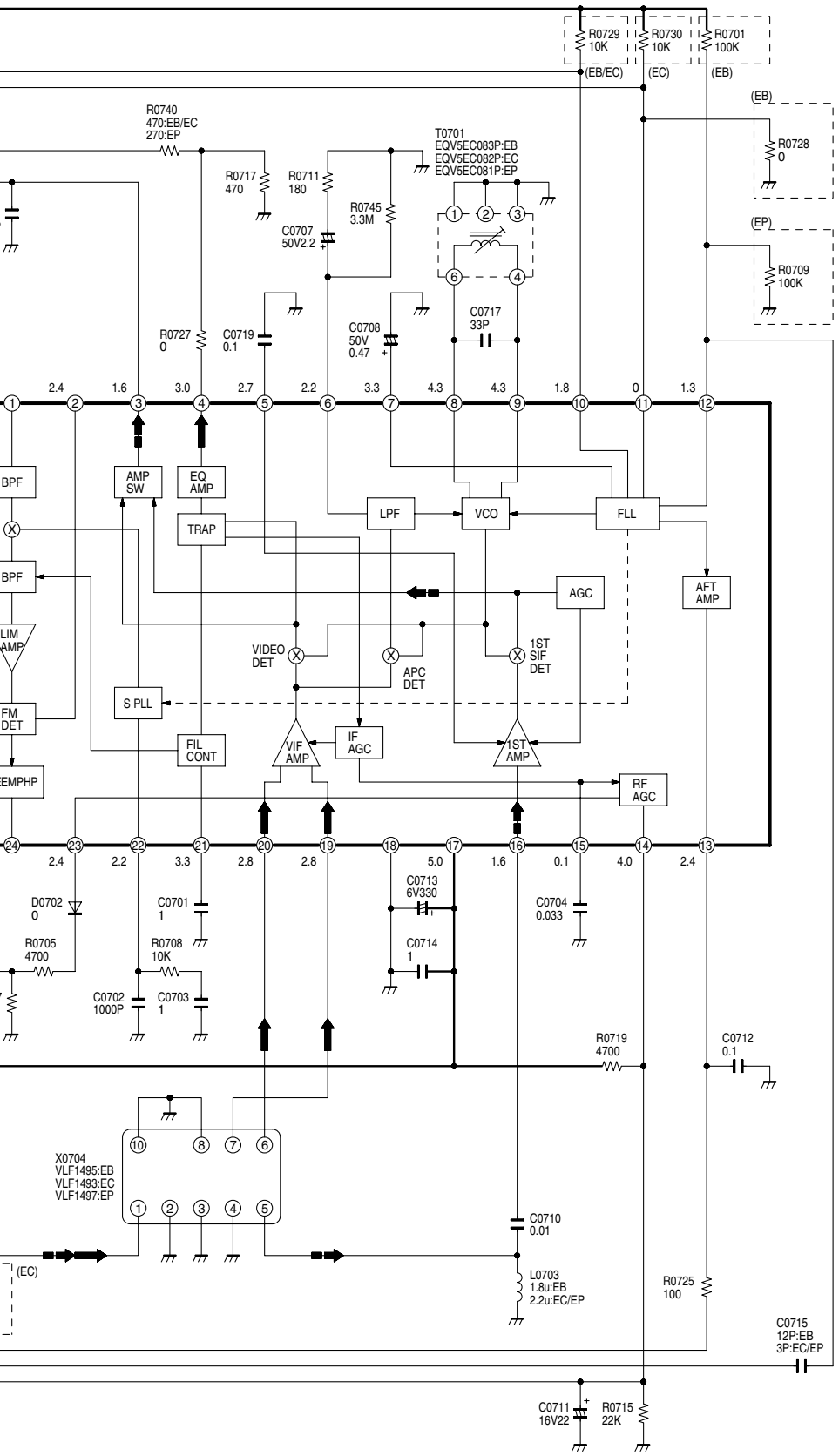
5 | 6 | 7 | 8

8.9. TV DEMODULATOR PACK SCHEMATIC DIAGRAM



NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEM
ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO

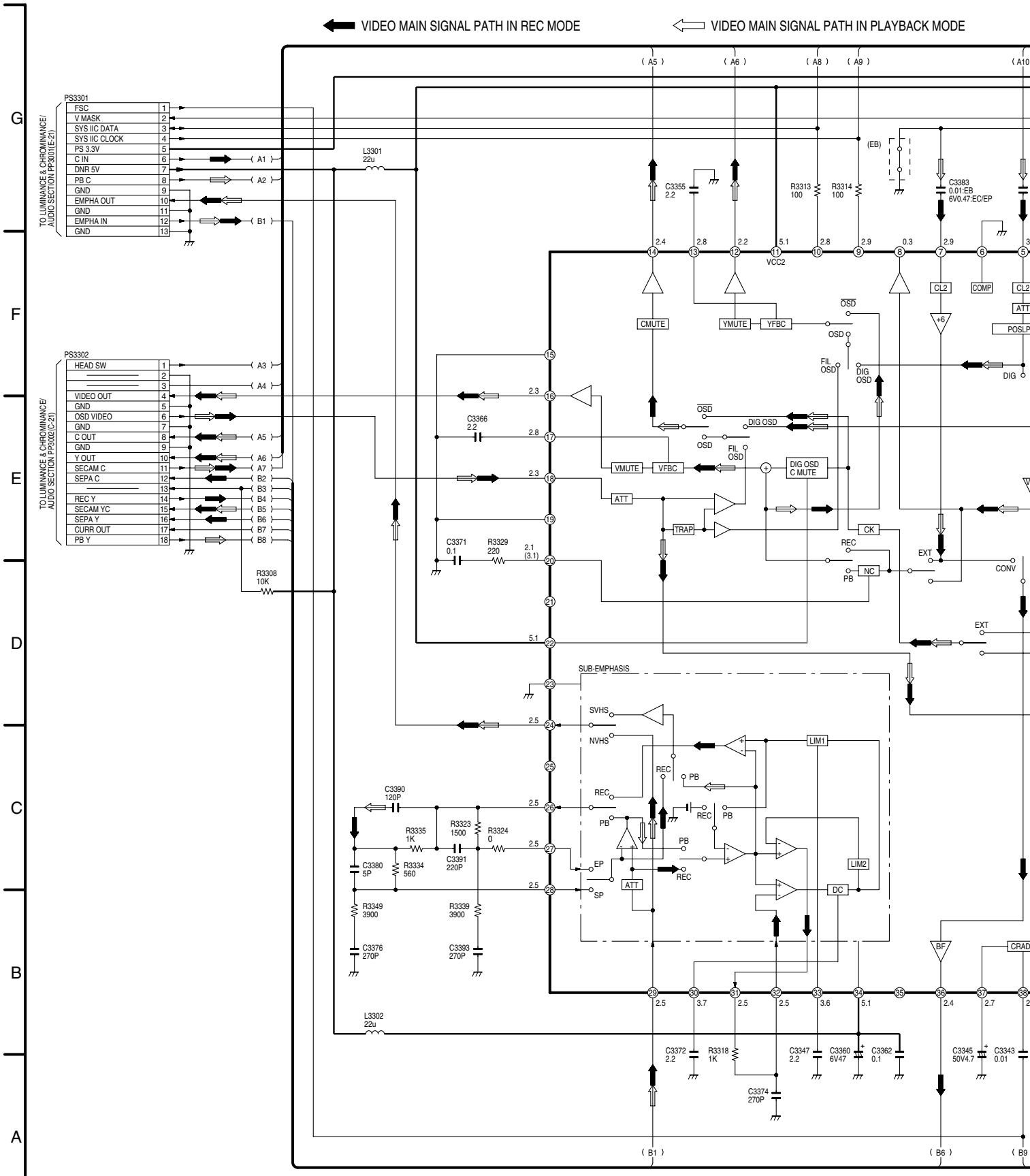


OWN ON THIS SCHEMATIC DIAGRAM FOR
T,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
TV DEMODULATOR PACK SCHEMATIC DIAGRAM

5 | 6 | 7 | 8

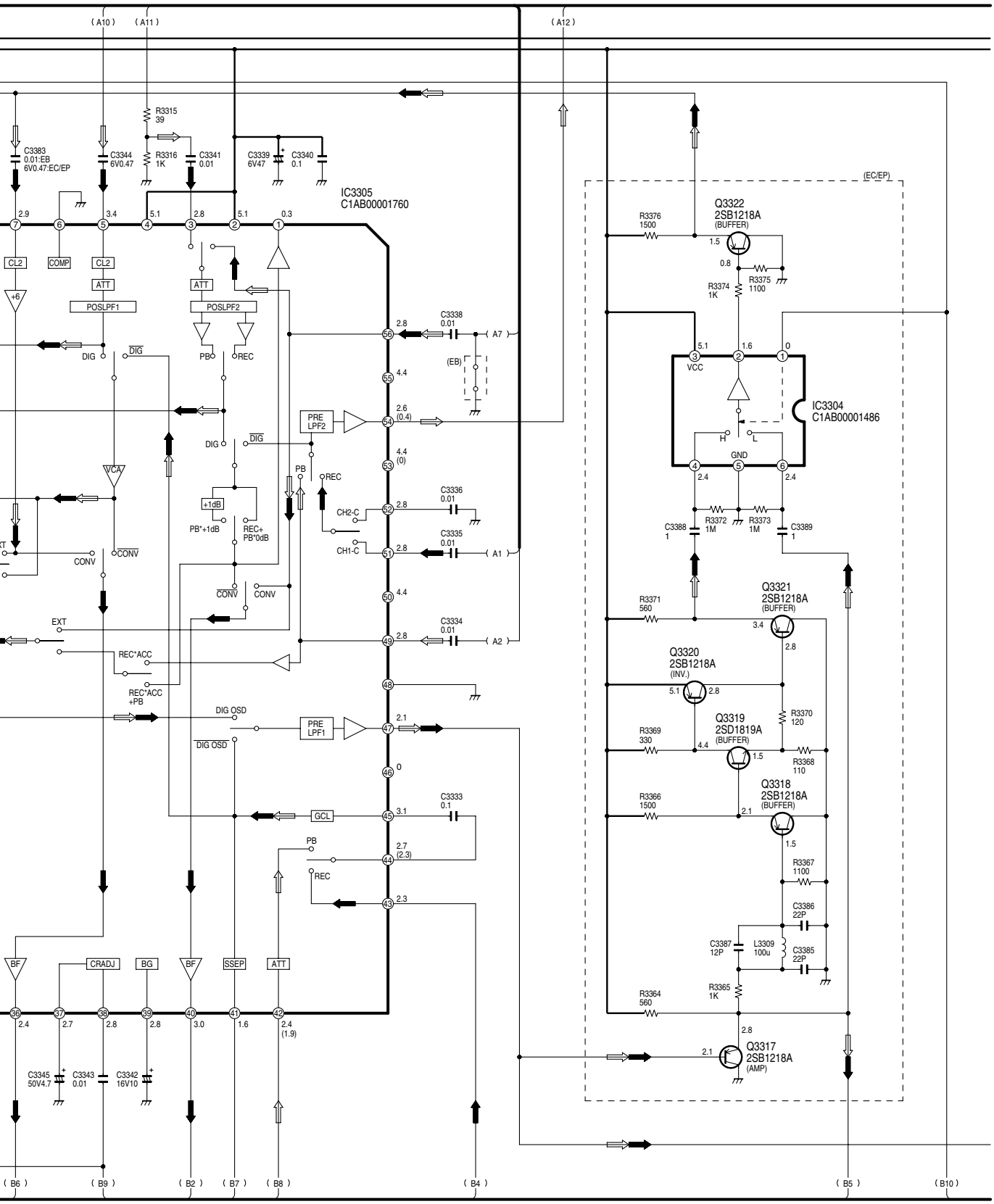
8.10. S-VHS PACK SCHEMATIC DIAGRAM



NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKE WITH PAL COLOUR SIGNAL.(SP MODE)

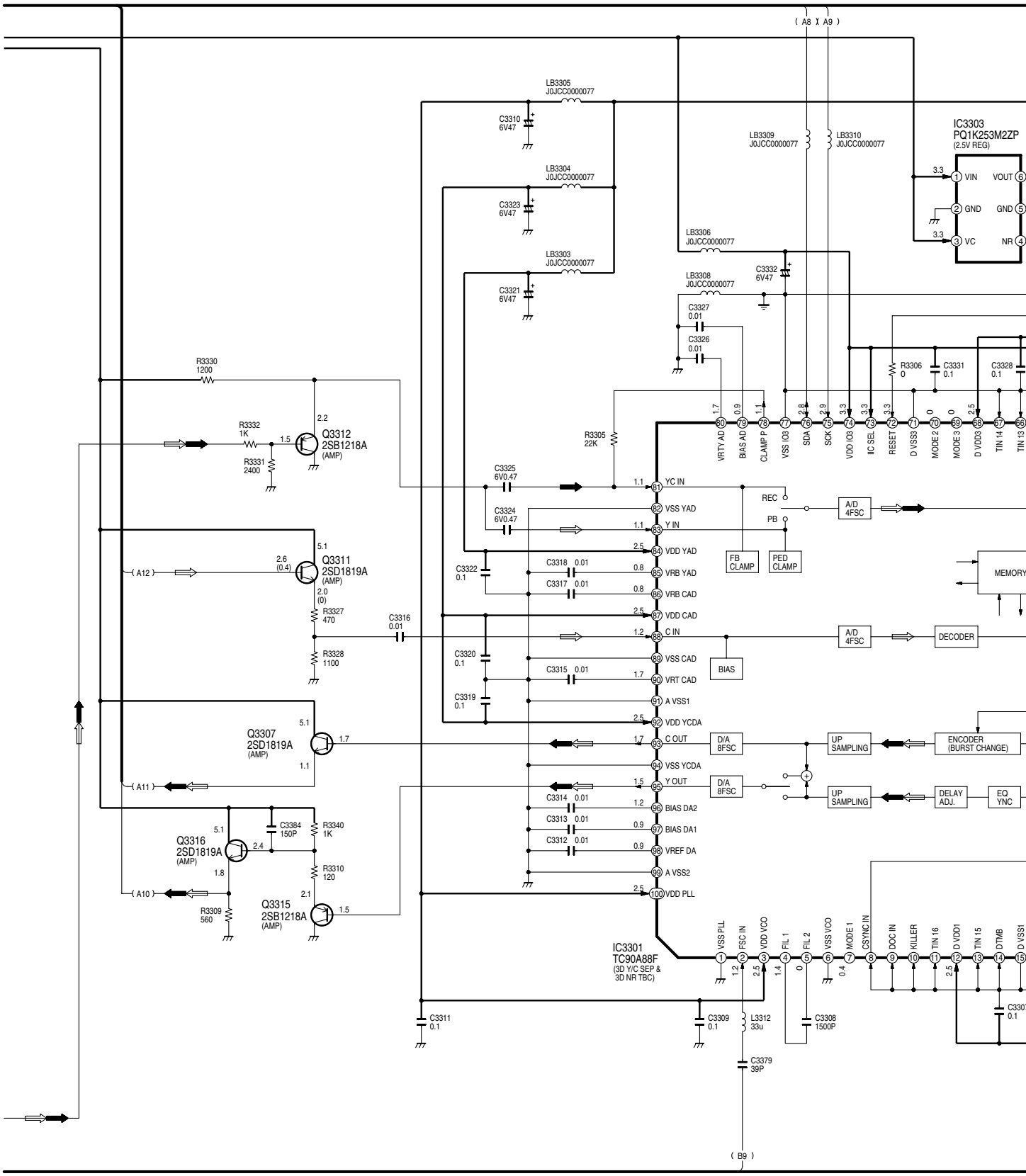
K MODE



GE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE

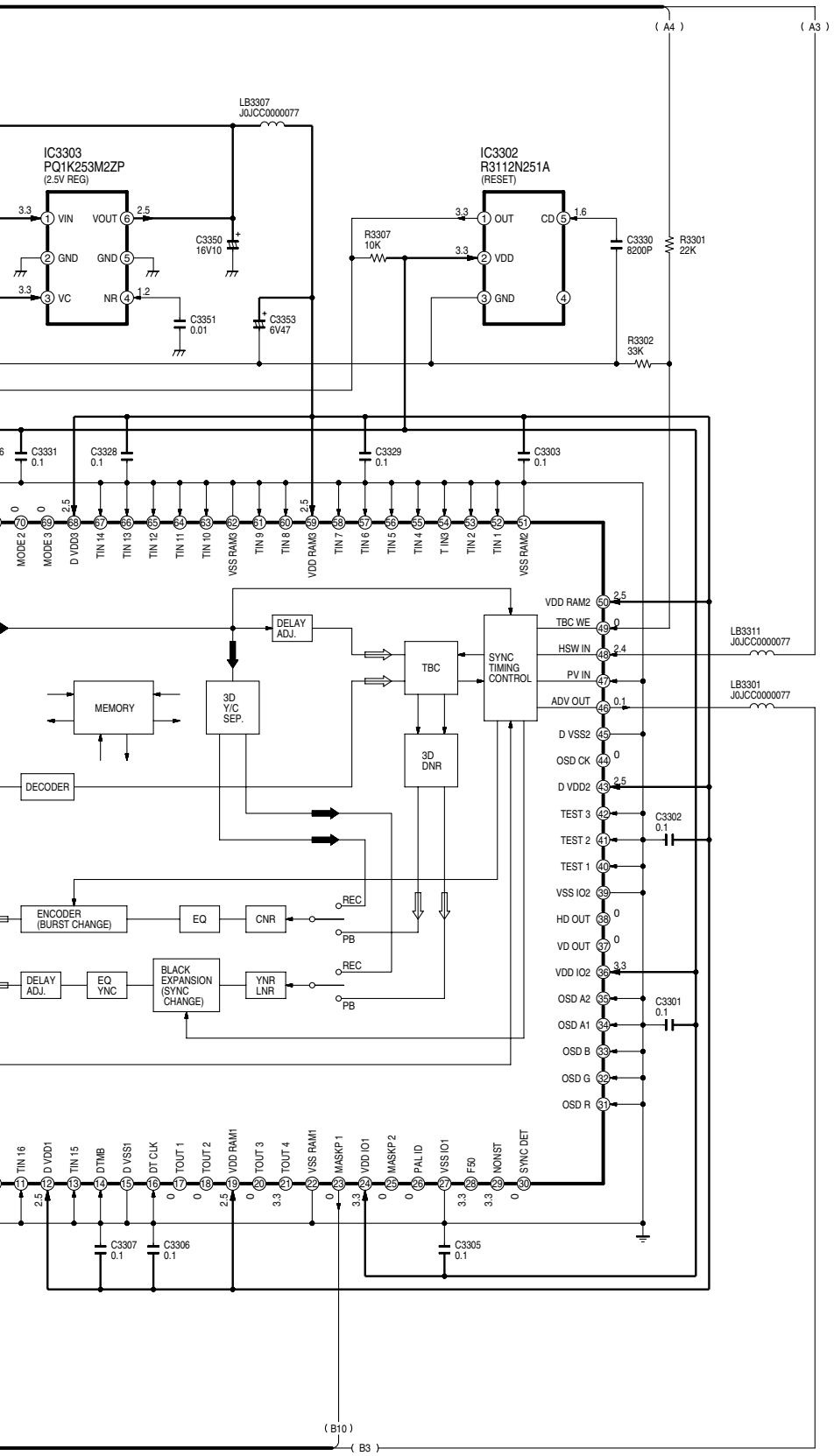
NV-SV120EB/EC/EP
S-VHS PACK SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11



NV-SV120EB/EC/EP
S-VHS PACK SCHEMATIC DIAGRAM

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

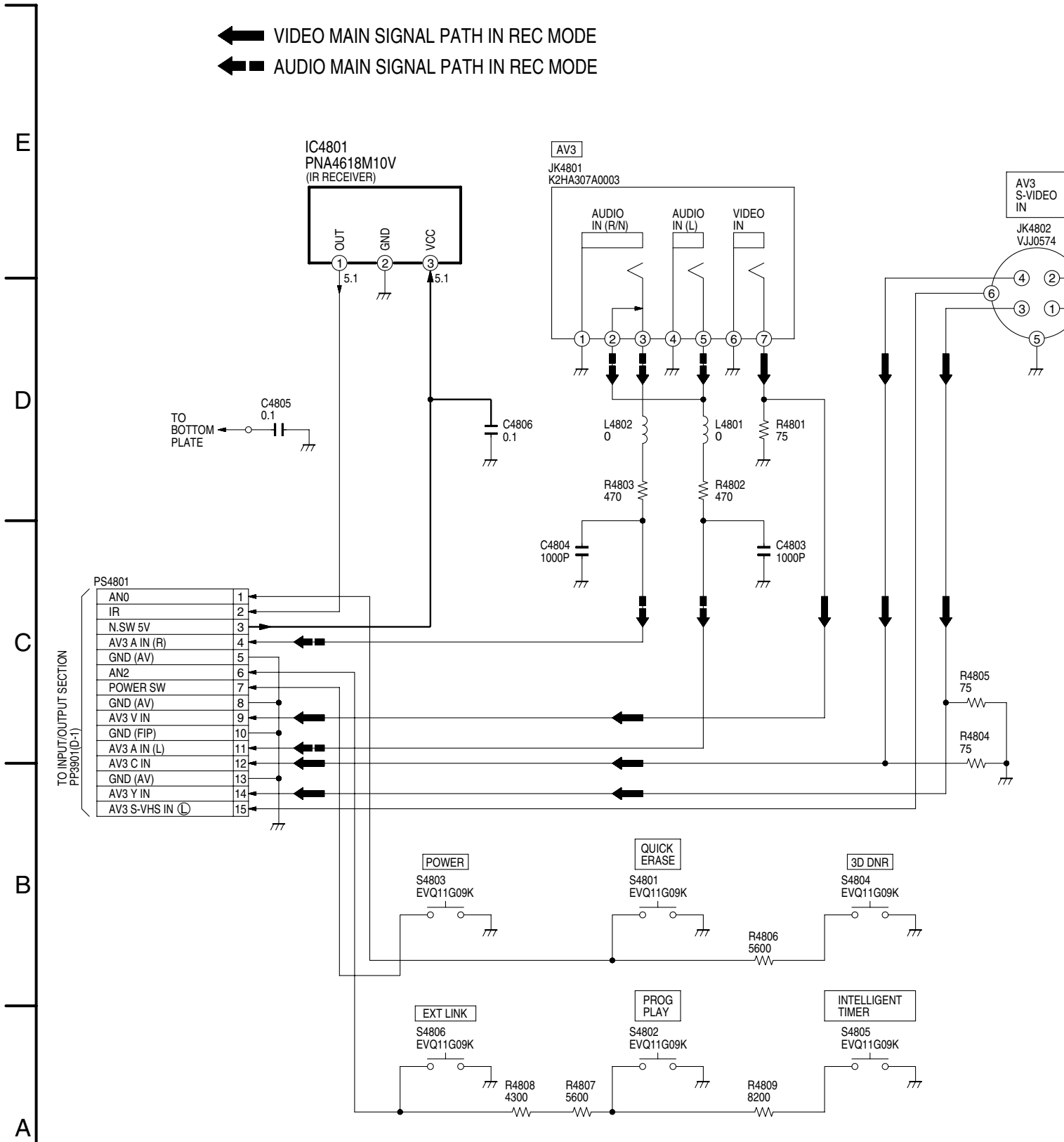


CHEMATIC DIAGRAM
REFER TO PARTS LIST.

NV-SV120EB/EC/EP
S-VHS PACK SCHEMATIC DIAGRAM

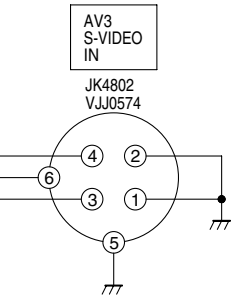
17 | 18 | 19 | 20 | 21

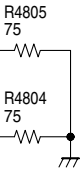
8.11. FRONT SCHEMATIC DIAGRAM



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

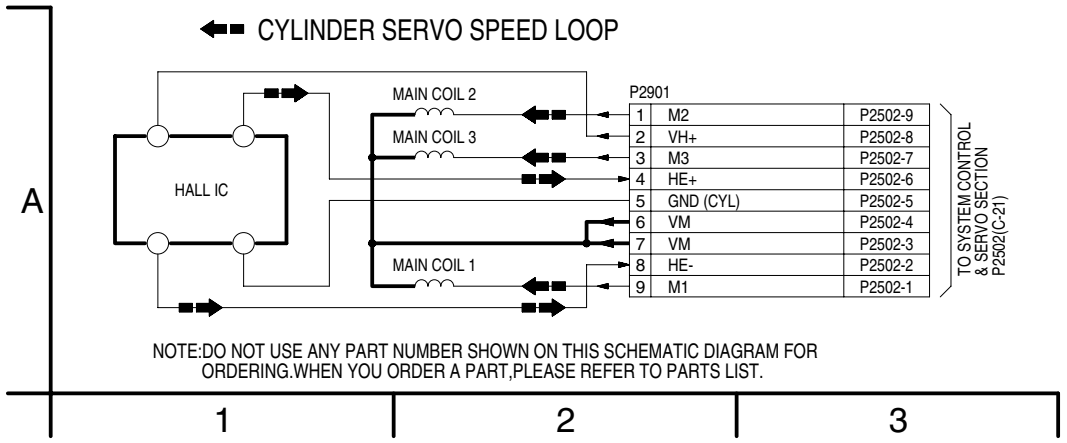
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.





NV-SV120EB/EC/EP
FRONT SCHEMATIC DIAGRAM

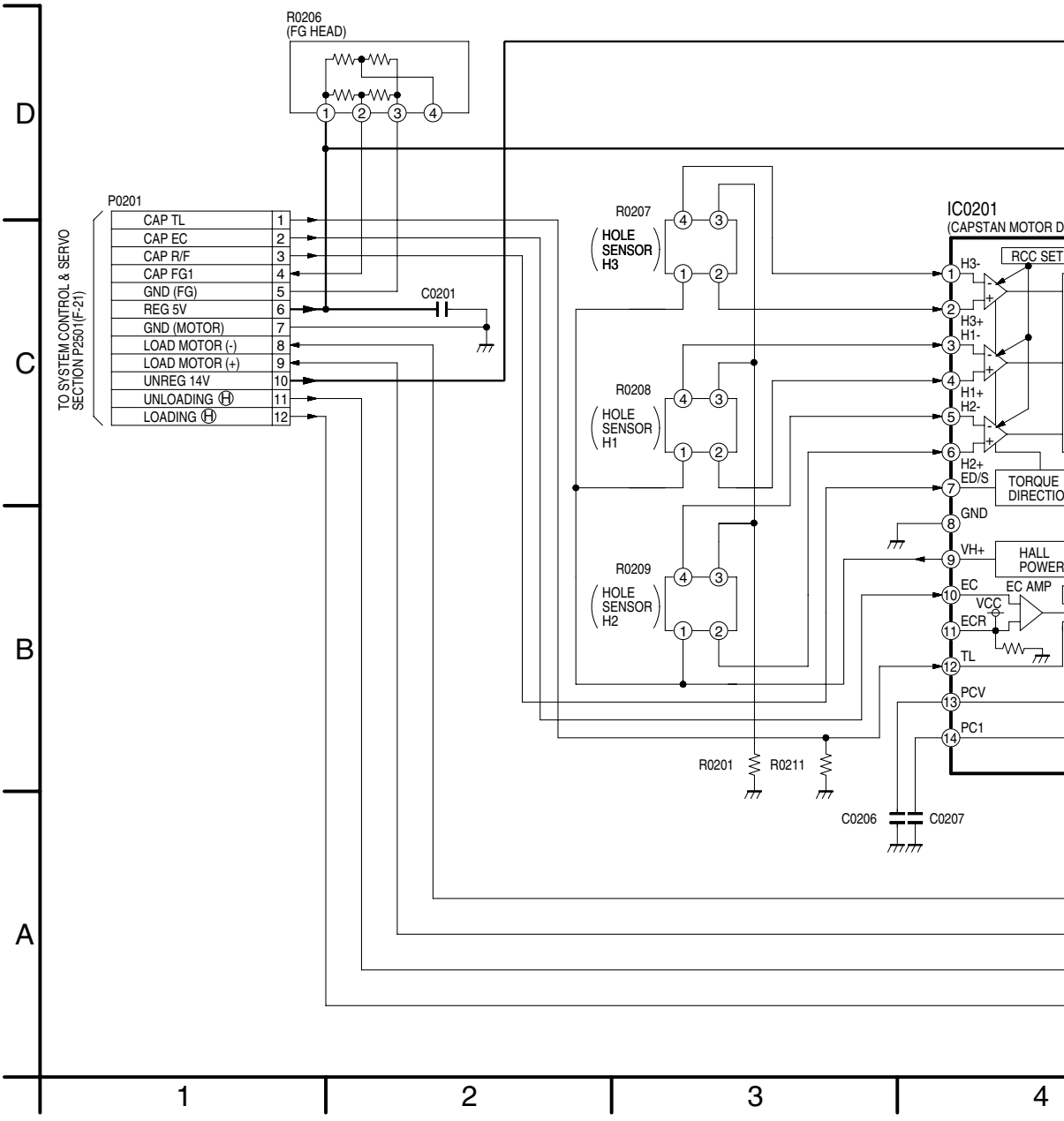
8.12. CYLINDER STATOR UNIT SCHEMATIC DIAGRAM



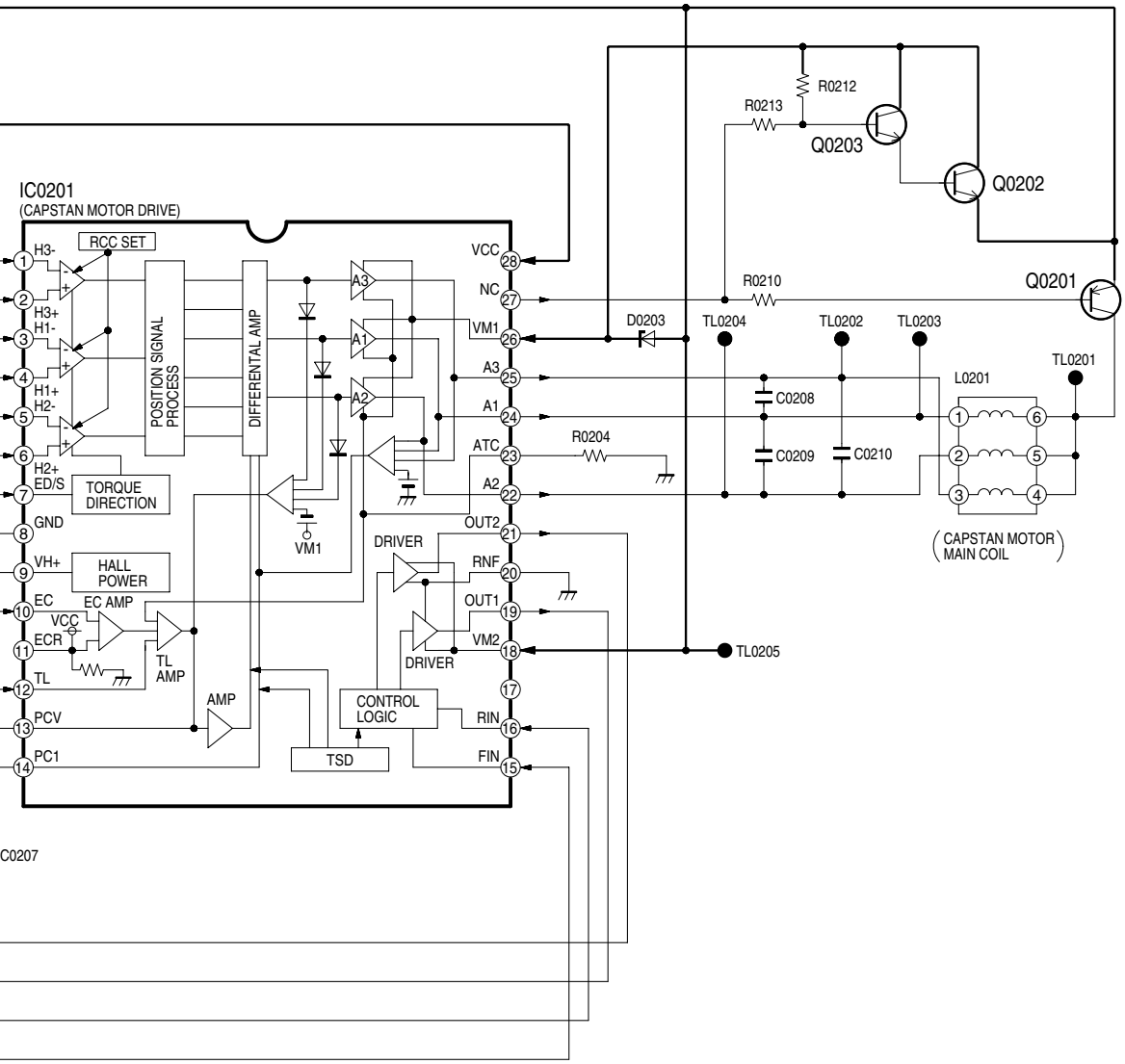
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-SV120EB/EC/EP
CYLINDER STATOR
SCHEMATIC DIAGRAM

8.13. CAPSTAN UNIT SCHEMATIC DIAGRAM



C/EP
TOR
AGRAM



NV-SV120EB/EC/EP
CAPSTAN UNIT SCHEMATIC DIAGRAM

4 | 5 | 6 | 7

T1150-3 STOP
1.6Vp-p (5msec.div.)

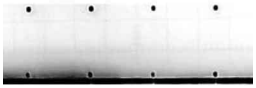
T1150-5 STOP
330Vp-p (5usec.div.)

T1150-6 STOP
340Vp-p (5usec.div.)

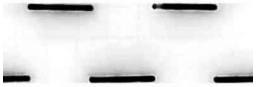
T1150-7 STOP
18Vp-p (10usec.div.)

Q1150-G STOP
15Vp-p (5usec.div.)

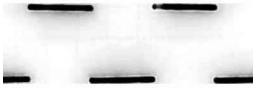
Q1200-1,2 STOP
0.5Vp-p (5usec.div.)



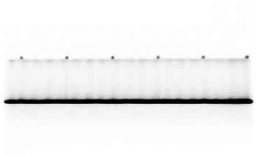
IC6001-13 PAUSE
5.0Vp-p (10msec.div.)



IC6001-18 REC
5.0Vp-p (10msec.div.)

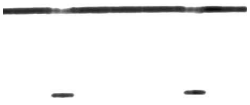


IC6001-19 REC
5.0Vp-p (10msec.div.)

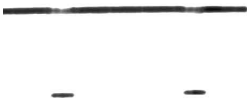


IC6001-48 REC
5.0Vp-p (10msec.div.)

IC6001-52 REC
2.1Vp-p (20µsec.div.)

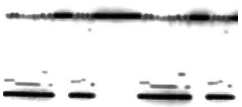


IC6001-68,69 REC
5.0Vp-p (10msec.div.)



IC6001-70 REC
5.0Vp-p (10msec.div.)

IC6001-71 REC
5.0Vp-p (10msec.div.)



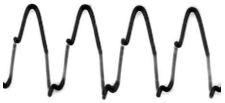
IC6001-72 REC
5.0Vp-p (10msec.div.)

IC6001-79,80 FF/REW
5.0Vp-p (1msec.div.)

IC6001-90 REC
5.0Vp-p (10msec.div.)

IC6001-94,95 REC
6.0Vp-p (10msec.div.)

IC6001-97 PLAY
0.6Vp-p (10msec.div.)



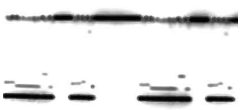
IC2501-1,2,16 REC
9.5Vp-p (5msec.div.)

IC3001-6 REC/PLAY
1.8Vp-p (0.5msec.div.)

IC3001-15,19,21 REC
1.0Vp-p (20µsec.div.)

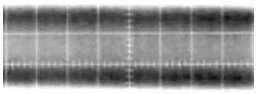
IC3001-45,46 PLAY
0.5Vp-p (20µsec.div.)

IC3001-73 REC/PLAY
5.0Vp-p (5msec.div.)

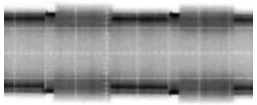


IC3001-74 REC/PLAY
5.0Vp-p (5msec.div.)

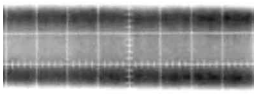
IC3001-80 REC/PLAY
0.6Vp-p (10msec.div.)



IC3001-85 PLAY
150mVp-p (20µsec.div.)

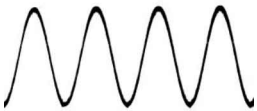


IC3001-86 REC
1.8Vp-p (5msec.div.)



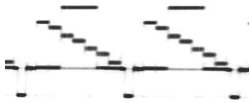
IC3001-87 PLAY
150mVp-p (20µsec.div.)

IC3001-96 PLAY
5.0Vp-p (5msec.div.)

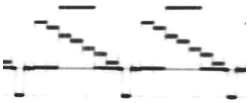


IC3001-98 REC
2.4Vp-p (1msec.div.)

PP3001-8 PLAY
0.8Vp-p (50µsec.div.)



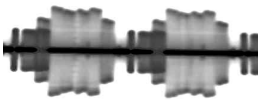
PP3001-10 REC/PLAY
0.5Vp-p (20µsec.div.)



PP3001-12 REC/PLAY
0.5Vp-p (20µsec.div.)

PP3002-4 REC/PLAY
2.0Vp-p (20µsec.div.)

PP3002-6 REC/PLAY
2.0Vp-p (20 µsec.div.)

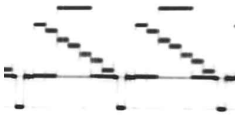


PP3002-8 REC/PLAY
1.6Vp-p (20µsec.div.)

PP3002-10 REC/PLAY
2.0Vp-p (20µsec.div.)

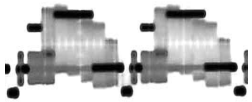
PP3002-12 REC
0.8Vp-p (20µsec.div.)

PP3002-14 REC
0.5Vp-p (20µsec.div.)

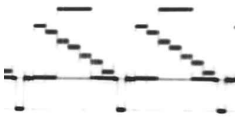


PP3002-16 REC
0.5Vp-p (20µsec.div.)

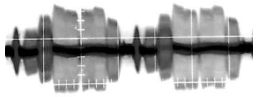
PP3002-18 PLAY
2.2Vp-p (20µsec.div.)



IC3301-81 REC
0.8Vp-p (20µsec.div.)

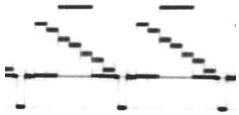


IC3301-83 PLAY
0.7Vp-p (20µsec.div.)

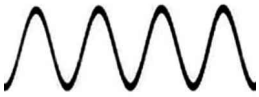


IC3301-88 PLAY
0.4Vp-p (20µsec.div.)

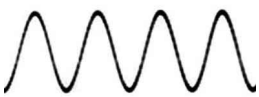
IC3301-93 REC/PLAY
0.6Vp-p (5.0µsec.div.)



IC3301-95 REC/PLAY
1.2Vp-p (10µsec.div.)



IC4501-9,14 REC
0.4Vp-p (5msec.div.)



IC4501-53,57 REC/PLAY
1.4Vp-p (0.2msec.div.)

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

IC4501

JK4801 (AV3) FRONT
AUDIO IN (R)
AUDIO IN (L)
PS4801 PP3901 4
PS4801 PP3901 11
2
4

JK4902 (AV1) TV
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
6 AUDIO IN (L)
TW4504
TW4503
TW4506
QR4504 MUTE
QR4504 MUTE
53
57
9
10

JK4904
AUDIO OUT (R)
AUDIO OUT (L)
TW4505
14
15

JK4901 (AV2) DECODER/EXT
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
6 AUDIO IN (L)
QR4503 MUTE
QR4503 MUTE
51
52

TO TUNER
RFC AUDIO OUT
QR4507 MUTE
59

FROM DECODER
TUNER AUDIO (R)
TUNER AUDIO (L)
8
13

IC3001

FROM DECODER
TUNER AUDIO (N)
1

TO/FROM AC HEAD
A.HEAD (W)
P4002 4
98
A.HEAD (R)
P4002 3
96

REC EQ
MUTE
VCA
PRE AMP
fh TRAP
R
P
MUTE
6
62
2
61
MUTE CTL
79

NORMAL SELECT SWITCH

SWITCH RCH
SWITCH LCH

OUTPUT SELECT SWITCH RCH
OUTPUT SELECT SWITCH LCH

INPUT SELECT SWITCH RCH
INPUT SELECT SWITCH LCH

PNR RCH
PNR LCH

AGC & SWITCH
AGC

FM MODULATOR/ DEMODULATOR
FM MODULATOR/ DEMODULATOR

LPF
LPF
BPF
BPF

AGC & SWITCH

IIC BUS INTERFACE
42
43
MAIN IIC CLOCK
MAIN IIC DATA
TO/FROM SYSTEM CONTROL

VCO F0
45
FSC
FROM LUMINANCE & CHROMINANCE

TW4511
27
AUDIO H.SW
FROM SYSTEM CONTROL

D.FM REC (H)
30
FROM SYSTEM CONTROL

PREAMP & SWITCH
29
TW4502
TW4501
24
21
22
P5001 8
P5001 9
P5001 10
L
R
Hi-Fi AUDIO HEAD

MUTE CTL
36
MUTE (H)
FROM SYSTEM CONTROL

NV-SV120EC/EB/EP
AUDIO BLOCK DIAGRAM

:VIDEO MAIN SIGNAL PATH IN REC MODE

:VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

IC3305
(SUB EMPHASIS,YC SEP/DNR INTERFACE,OSD YC SEP)

SUB EMPHASIS

TO/FROM LUMINANCE & CHROMINANCE

PP3001 | PS3301 10 — EMPHA OUT — 24

PP3001 | PS3301 12 — EMPHA IN — 29

SVHS

VHS

ATT

REC VHS SYNC for VIDEO PROCESS — 41 — SYNC SEP

FROM LUMINANCE & CHROMINANCE

PP3002 | PS3302 14 — REC Y — 43

PP3002 | PS3302 18 — PB Y — 42 — ATT

44

45 — GCL

(EC/EP)

IC3304, Q3318-Q3321

TO LUMINANCE & CHROMINANCE

PP3002 | PS3302 15 — SECAM YC — 7

SECAM DELAY LINE

Q3322 BUFFER

Q3317 BUFFER

(EB)

36 — BF — CONV — CONV

VCA

INT

EXT

NC

DIG

DIG

R

P

CL2

+6

OSD

PRE LPF 1

47

PP3002 | PS3302 12 — SEPA C — 40 — BF — CONV — CONV

PP3002 | PS3302 16 — SEPA Y

P

+1dB

R

PP3001 | PS3301 6 — C IN — 51 — CH1-C

PP3002 | PS3302 8 — PB C — 52 — CH2-C

TO/FROM LUMINANCE & CHROMINANCE

PP3002 | PS3302 4 — VIDEO OUT

PP3002 | PS3302 11 — SECAM C — A1

PP3002 | PS3302 8 — C OUT — A2

PP3002 | PS3302 6 — OSD VIDEO — A3

PP3002 | PS3302 10 — Y OUT — A4

49

REC(ACC) +PB

REC (ACC)

INT

EXT

CK

DIG OSD C MUTE

16 — V MUTE — V FBC

DC

LIM 1

LIM 2

SP

EP

LAG-LEAD FILTER

28

27

26

31

32

POS LPF 1 — ATT — CL2 — 5 — AMP — Q3315, Q3316 — A4

Y FBC — Y MUTE — 12

ATT — 18 — A3

C MUTE — 14 — A2

PRE LPF 2 — 54 — BUFFER — Q3311

POS LPF 2 — ATT — 3 — BUFFER — Q3307

56 — A1

(EB)

DIG OSD

FIL OSD

OSD

YC SEP FOR OSD

TRAP

IC3301
(3D YC SEP & 3D NR TBC)

Q3312 BUFFER — 81

83

FEED-BACK CLAMP

PEDESTAL CLAMP

A/D 4FSC

3D YCS

DELAY ADJ.

TBC

3D NR

SYNCHRONIZATION PROCESSING TIMING CONTROL

YNR LNR

CNR

BLACK EXPANSION SYNC CHANGE

EQ & YNC

EQ

DELAY ADJ.

ENCODER BURST CHANGE

UP SAMPLING

DECODER

A/D 4FSC

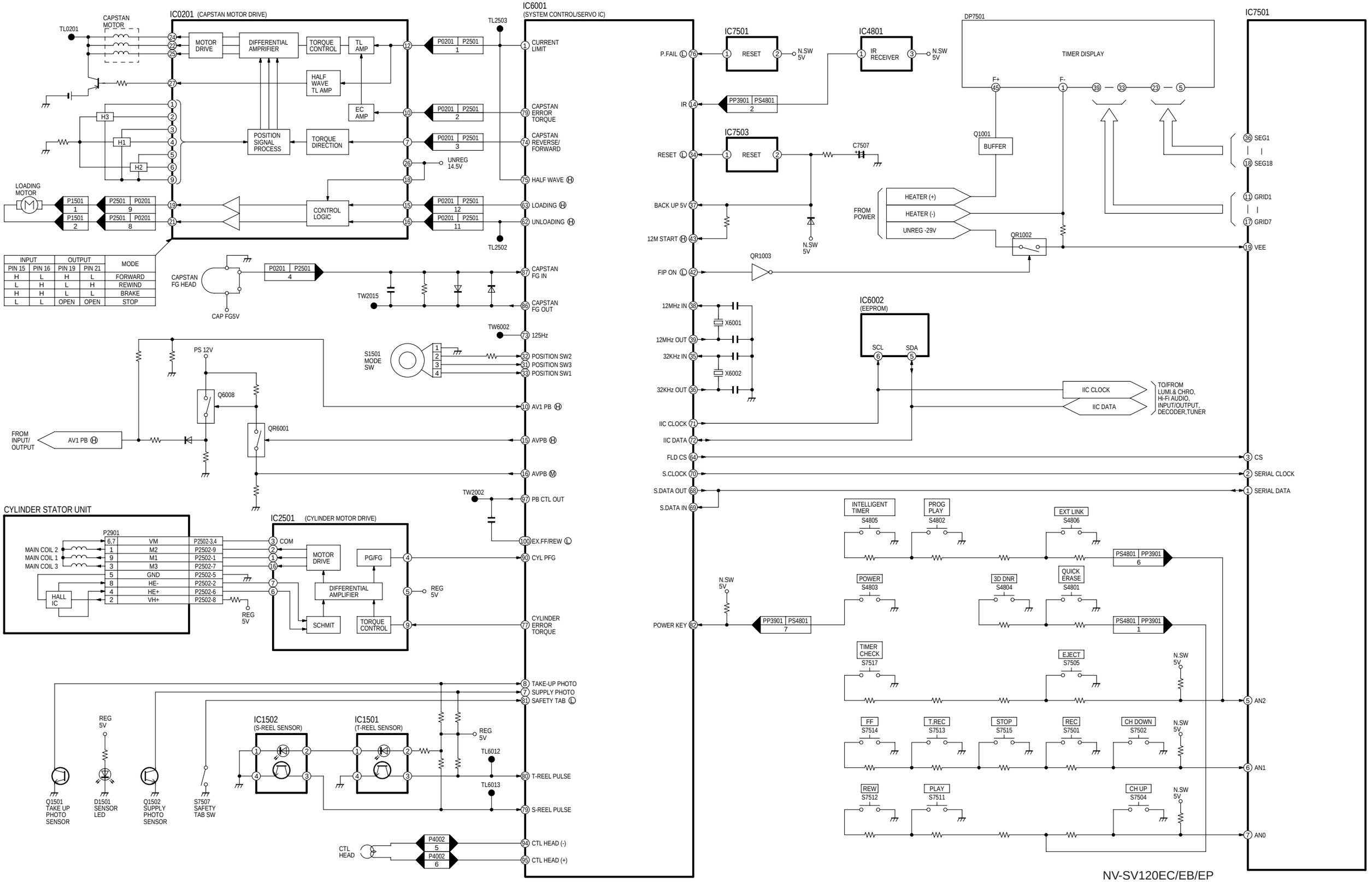
BIAS

88

D/A 8FSC — 95

D/A 8FSC — 93

NV-SV120EC/EB/EP
S-VHS BLOCK DIAGRAM



NV-SV120EC/EB/EP
SYSTEM CONTROL & SERVO BLOCK DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

IC4902
(INPUT/OUTPUT SELECT)

IIC BUS INTERFACE
DATA 1
CLOCK 2

JK4903
S-VIDEO OUT
4 REAR C OUT
3 REAR Y OUT

TW3024
TW3021

IC4901
NOR 1
S-VHS 5
7

JK4902
AV1(TV)
19 VIDEO/Y OUT
15 C OUT
20 VIDEO IN

Q4901, Q4902
BUFFER

TW3004
V IN2 36
CLAMP

JK4904
VIDEO OUT
REAR VIDEO OUT

TW3002
V OUT AV1 33

JK4901
AV2
(DECODER)
19 VIDEO OUT
15 C IN
20 VIDEO/Y IN

V OUT AV2 34
CPN Y IN1 38
CLAMP
V IN3 40
CLAMP

TUNER/
TV DEMODULATOR
6 RFC VIDEO OUT
24 TUNER VIDEO

V IN1 23
CLAMP
CPN C IN1 42

JK4801
AV3
VIDEO IN
FRONT VIDEO IN
PS4801 | PP3901 9

JK4802
AV3
S-VIDEO IN
4 FRONT C IN
PS4801 | PP3901 12
3 FRONT Y IN
PS4801 | PP3901 14

CPN Y OUT 31
CPS OUT 29
CPN C OUT 30

CLAMP
CPN Y IN1 10
CLAMP
CPN C IN1 8
CLAMP
CPN Y IN3 6
CLAMP
CPN Y IN2 20
CPN C IN2 18
CLAMP
V IN4 16

CPS/ CPN Y OUT 14
CPN C OUT 12

TW3022
TW3023

(EC/EP)
L3016, C3063
1.7MHz TRAP
L3015, C3069
4.47MHz BPF
CHROMA SEPARATOR
Q3006
BUFFER
IC3002
L
H
2
4

SECAM YC
SECAM C
Y OUT
C OUT
OSD VIDEO
VIDEO OUT
VIDEO/Y IN
REC C

A8
A7
A6
A5
A4
A3
A2
A1

Q6010
BUFFER

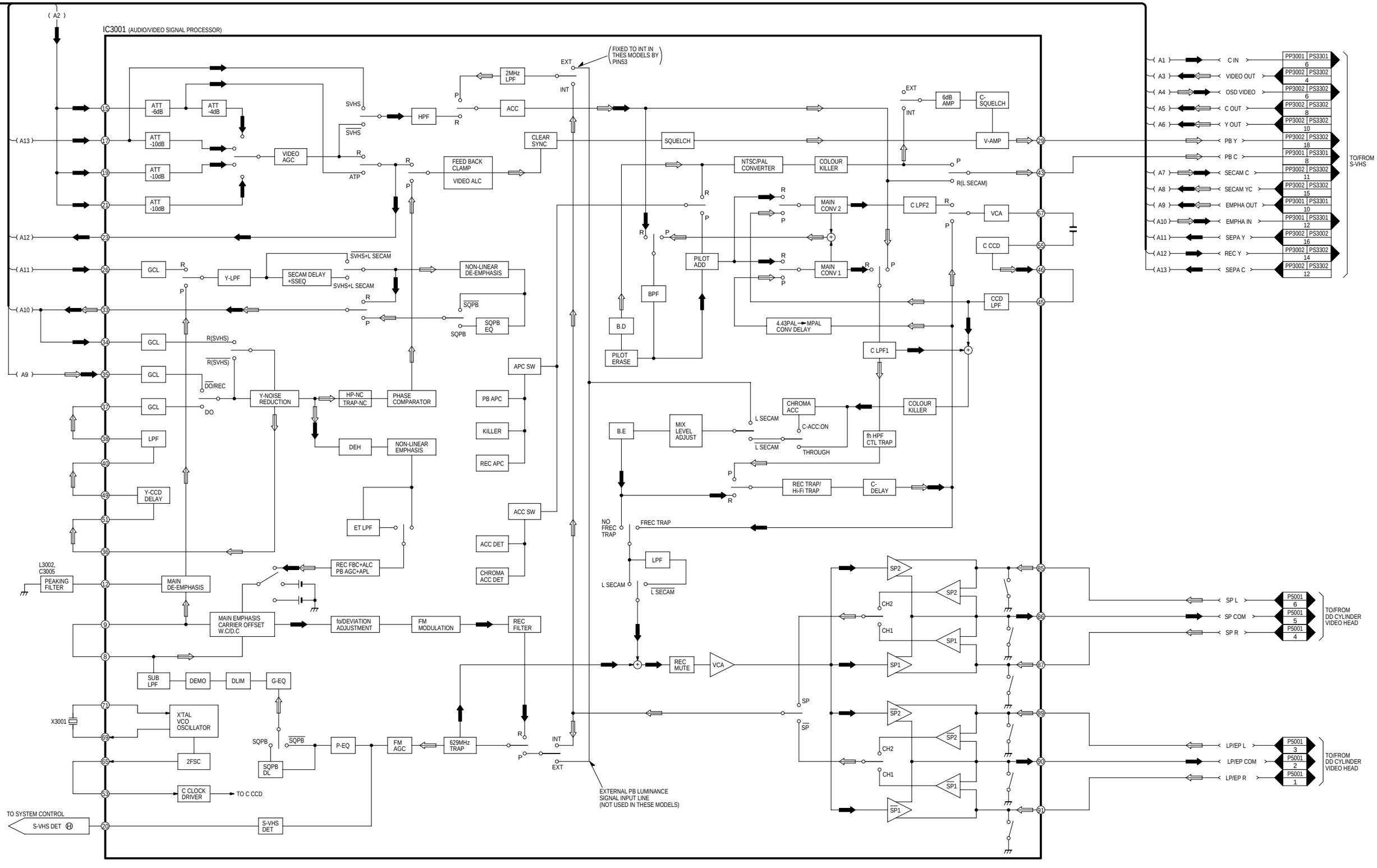
IC6001
OSD SIGNAL PROCESS
52
50
72 IIC DATA
71 IIC CLOCK

Q6009
BUFFER

IC6003
(OSD u-COM SLICER)
5 SDA
4 SCL
VCBS 17

Q6004
AMP

NV-SV120EC/EB/EP
LUMINANCE & CHROMINANCE BLOCK DIAGRAM



NV-SV120EC/EB/EP
LUMINANCE & CHROMINANCE BLOCK DIAGRAM

NV-SV120EC/EB/EP
LUMINANCE & CHROMINANCE BLOCK DIAGRAM